How these 18 Experts can help you

Get into a High Pay ACCOUNTING CAREER

LaSalle's famous staff of Accounting authorities are helping thousands prepare for fast promotions and bigger pay. They can do the same for you!

If your heart is set on a larger income and all that it means... better home—fine car—larger bank account—more of the good things of life....

If that's your ambition and you are really serious about it, then you owe it to yourself to get the REAL FACTS about LaSalle Accounting, and the many good-pay opportunities that can be YOURS through LaSalle's famous Problem Method plan.

It matters not whether you've had a single day of experience in this field—or whether you have already started but want to climb higher. LaSalle's expert training is designed to take you *from where you are... to where you want to be...* in higher positions and a lifetime career of security and good income.

WHY YOU CAN'T FAIL TO GAIN

You see on this page a panel of experts who know Accounting from A to Z...all the way from Basic Accounting on up through Accounting Systems, Cost Accounting, Auditing, Federal Income Tax, and training for the CPA certificate. These are only part of our instruction staff. But what is most important to you ... **These CPAs and Expert Accountants know how to impart their knowledge to others . . . how to help you prepare quickly yet thoroly for success in this lucrative field.**

The proof? What stronger proof could there be than that more than 4,500 Certified Public Accountants (one out of every 13 of the U.S. total) has trained with LaSalle? Or the hundreds of thousands of men and women whom LaSalle has helped qualify rapidly for more money, a brighter future, in a high-pay-lifetime career? These thousands came to us with different backgrounds of experience and varying degrees of ambition. Many have reported raises and promotions after only a few weeks of training. Thousands of them have written to say they are now earning 50% more—even *double* their former incomes—*often in less than a year*. These letters are published in book form for your inspection. They were written by real people, with real income problems and ambitions—people who might be your next-door neighbor.

Yes, if you are really sincere in wanting to better your position—start your income climbing—enjoy a lifetime career of high standing and high reward—this friendly staff of experts can help you.

SAMPLE LESSON SENT FREE MAIL COUPON BELOW

You don't have to wonder what LaSalle's Accounting plan is like. You will be sent a free sample lesson, which does not obligate you in any way. Study it—keep it—see for yourself how simple, clear, and easy it is to master. This is an actual lesson right out of the regular training—to show you exactly how LaSalle's Problem Method has trained more than 1,400,000 men and women from all walks of life.

Also...the latest book, "Opportunities in Accounting," gives all the latest facts about the new and growing opportunities in several different fields of profitable employment.

This can be an important day in your life. A coupon like the one below has started hundreds of thousands of men and women toward a bigger job, a larger income. It can do the same for you.

Accredited Member, National Home Study Council

Mail the Coupon Today!

FREE BOOKS

LA SALLE EXTENSION UNIVERSITY

A Correspondence Institution

417 S. Dearborn Street Dept. 1493H Chicago 5, Ill.

Send me free Sample Lesson in Accounting—also, latest free book, "Opportunities in Accounting," and "Success Reports"...all without cost or obligation.

Name..... *Age*.....

Address.....

City & Zone..... *State*.....

Sworn statement from CHAS. LEMMING reads:

"After starting my own business

I've averaged $100 A DAY —most of it clear profit!"

• *If you want to be independent—free from layoffs, bosses—start profitable, year 'round business of your own.* **Ours is NOT a lease proposition.** *You own the machine, you work when and where you please, and all the money you take in is your own.* **FREE** *book tells you how.*

MAIL COUPON TODAY FOR FREE BOOK

VON SCHRADER MFG. CO.
112 "D" Pl., Racine, Wisconsin

Without obligation rush your **FREE** booklet about how I can start my own permanent, profitable electric Upholstery Cleaning business.

Name_____

Address_____

City_____ Zone____ State____

Not everyone does as well... Mr. Lemming owns two machines

In city of less than 50,000, Mr. Lemming started his own business after filling in coupon like one below. He averaged $100 a day during first year, some days $200. F. E. Doran grossed $1050 in single month. Geo. Held grossed $300 in one week.

How much you earn depends largely on you. No special skill, no large investment required for our electric upholstery cleaning machine. Start spare time until full time justified. Hire helpers as needed.

NO SHOP NECESSARY • You clean upholstered furniture on customers' premises—homes, hotels, motels, etc. Auto upholstering, too. No hauling; operate from your home. Watch business grow as satisfied customers tell friends. Supplies cost little, profits high.

FOR INDUSTRY OR HOMECRAFT
8" TILT ARBOR SAW
BUY DIRECT FROM FACTORY

BLADE TILTS • TABLE REMAINS LEVEL

NOW $9.95 FACTORY PRICE

Complete as shown less blade

Heavy duty all cast iron and steel construction. Precision ground cast iron table. Price includes massive cast iron mitre gauge and patented motor drive that fits any motor. Does everything same as saws costing five times as much—cross cuts, rips, bevels, mitres, dadoes, cuts compound angles. Adjustable depth of cut; 0" to 2¼".

SPECIAL BARGAIN—This saw is our 1960 model. Brand new—sent to you in factory sealed cartons. Sold and guaranteed direct from factory to you at a fantastic bargain. This machine has features of machines costing many times more. 480,000 now out working—winning praise everywhere.

MONEY-BACK GUARANTEE
Try this famous saw 10 days. If not completely delighted —FOR ANY REASON—return for immediate refund.

SENT EXPRESS COLLECT Send check or M.O. $2.00 deposits on C.O.D.'s. We reserve right to refund money if stock is exhausted. Avoid disappointment. Order right now!

AMERICAN MACHINE & TOOL CO.
ROYERSFORD 27, PA.

MEN PAST 40

Afflicted With Bladder Trouble, Pains in Back, Hips, Legs, Nervousness, Tiredness.

If you have these troubles, particularly bladder trouble, then your condition may be traced to Glandular Inflammation . . . a constitutional disease. Neglect of this condition often leads to premature old age and sometimes incurable malignancy.

The Excelsior Medical Clinic has a New Free Book that tells how thousands of men have been successfully treated here at Excelsior Springs for Glandular Inflammation by NON-SURGICAL Methods. They found soothing relief and a new outlook in the future of life.

This Free Book may prove of utmost importance in your life. Write Today. There is no obligation.

Excelsior Medical Clinic, Dept. B5129, Excelsior Spgs., Mo.

Better Than Your Own SHOE STORE AT HOME

No investment, no experience needed. Just show magic cushion comfort to friends, neighbors, co-workers. Advance commissions to $4.00 a pair, plus Cash Bonus, Paid Vacation, $25.00 Reward Offer. Outstanding values for men, women, children. Money back guarantee. Shoe samples supplied without cost. Write TODAY for FREE new 84 page catalog and full details.

Two-Eyelet Hit With Cushioned Comfort

TANNERS SHOE CO., 163 BROCKTON, MASS.

There is an immediate and growing need for Trained Technicians in Industrial Electronics, Radio-TV Servicing and Communications. FOR HIGH PAY, INTERESTING JOBS, MORE PRESTIGE AND A BRIGHTER FUTURE, investigate training at home in your spare time with NRI–oldest and largest home study school of its kind.

SPECIAL TRAINING KITS AT NO EXTRA COST

As part of your training NRI sends you specially developed kits that give actual practice, make NRI training come to life in an exciting, practical, easy-to-understand manner. You keep

all the equipment you get . . . yours at *no extra cost.* See and read about training kits, other course details, the growing Electronics field, data on amazing new developments, job opportunities in FREE 64-page catalog we send you. No obligation. No representative will call. Mail coupon NOW. No postage needed. Use handy label below.

Send for FREE Catalog

The Amazing Field of Electronics

ACT NOW

MAIL COUPON TODAY

National Radio Institute
WASHINGTON 16, D. C. IAC

Please send me full information without cost or obligation. (No representative will call. Please print.)

Name _____ Age ____

Address _____

City _____ Zone ____ State _____

ACCREDITED MEMBER NATIONAL HOME STUDY COUNCIL

No Stamp? USE THIS

Just cut out and paste on envelope. Enclose coupon.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN U.S.A.

FIRST CLASS PERMIT NO. 20[illegible] WASHINGTON, D.C.

POSTAGE WILL BE PAID BY
NATIONAL RADIO INSTITUTE
WASHINGTON 16, D.C.

FREE! LAFAYETTE

ELECTRONICS 324-PAGE 1961 CATALOG 610

From the world's leading supplier of electronics and stereo hi-fi equipment

HUNDREDS OF EXCLUSIVE LAFAYETTE FINE-QUALITY ITEMS AVAILABLE IN THIS CATALOG ONLY

This biggest, best and most comprehensive catalog in our history, featuring "The Best Buys in the Business." Thousands of items at the lowest money-saving prices.

SATISFACTION GUARANTEED OR MONEY REFUNDED

FOR ELECTRONICS SCIENCE & TECHNOLOGY

The "complete shopping center" for the audiophile, technician, engineer, student, hobbyist, serviceman and dealer. Exclusive at Lafayette—Lafayette Kits: easily the best value for your money any day.

MAIL THE COUPON TODAY FOR YOUR FREE CATALOG

LAFAYETTE LOCATIONS

JAMAICA • BRONX • NEW YORK CITY
NEWARK • PLAINFIELD • PARAMUS • BOSTON

Lafayette Electronics Dept. TA-1
P.O. Box 190
Jamaica 31, N. Y.

Send me the FREE 324-pg. 1961 catalog 610.

Name.....

Address.....

City.....Zone.....State.....

NEVER BEFORE SO MANY FEATURES . . . SO MANY "EXTRAS"!

sensational NEW Evans WOOD FOLDING RULES

Evans "GOLD TIP" 6 ft. EXTENSION RULE

1. FREE! Rule holster with belt clip.
2. EASY TO READ! Marked in inches, plus feet-and-inches. Stud marks every 16". "Flags" every foot.
3. BUILT-IN GRADUATED BRASS TIPS at both ends.
4. BRASS EXTENSION, graduated for inside measurement. (Models X40 and X40F only).
5. MANUFACTURER'S REPLACEMENT AND REPAIR SERVICE!

Only $2.49

FREE BRASS NAMEPLATE plus set of "A to Z" metalized initials with all rules.

Also available: STANDARD "SILVER TIP" Rule, $1.79

Evans RULE CO. Factories at: Elizabeth, N. J. & Montreal, Quebec

MI HOME CRAFTS SHOP

continued from page 2

SPECIAL FEATURES

Garage To Rumpus Room 100
Cabinets For Stereo Components 110

HOME AND SHOP

Party Tray 106
Home Hints 117
Hidden Vanity Box 118
Bunk Bed 124
Tile-Topped Lamp Table 128
Shop Shorts 131
Bookcase Radiator Enclosure 134
Shaker Doll Cradle 148
Roof Hatch 150
Kitchen Slate 152

ELECTRONICS

Emergency Lantern 108

AUTOMOTIVE

Winter Starting 120
Service Tips From Detroit 123
Car Kinks 138

PHOTOGRAPHY

Photo Kinks 142
Copy Box And Camera Stand 144

PAINTING

Fresh Paint Tips 147

DEPARTMENTS

MI's Hardware Store 127
Home And Shop Shorts 132
Golden Hammer Award Winners 140

In Spare Time at Home—Prepare for a Better Job—or Your Own Business in One of the Many Branches of

ELECTRONICS

You build and keep this valuable Vacuum Tube VOLTMETER

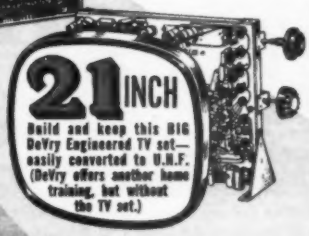
You build and keep this 5-inch COLOR OSCILLOSCOPE—almost a "must" for TV servicing.

RADIO – TELEVISION – RADAR

If you are seeking a better job or a business of your own, the appealing field of Television-Radio-Electronics offers REAL PROMISE!

In this fast-growing field, trained Electronic technicians find many good-paying, interesting jobs in manufacturing, installing, operating, servicing. Equally important is the fact that these are GOOD JOBS—offering the kind of a future that an untrained man often dreams about.

No previous technical experience or advanced education needed. Prepare for this profitable field in your spare time at home, or in our modern Chicago or Toronto Laboratories. Nothing else like it! Send for FREE details.



HOME MOVIES
. . . make important points crystal clear. Speeds your learning. It's almost like having an instructor at your side!

MILITARY SERVICE
If you are subject to military service, the information we have should prove very helpful. Mail coupon today.

COLOR TV
DeVry Tech's program also includes training in Color Television

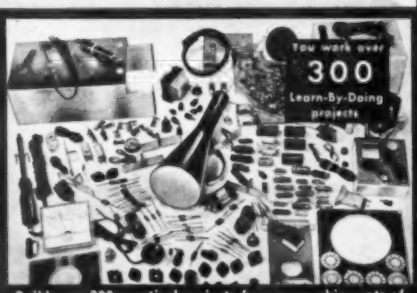
EARN WHILE YOU LEARN
After you get part of DeVry Tech's training with equipment at home, you may then in your spare time, begin to earn real money servicing Radio and Television sets.

Your GUIDE

to Profitable Job Opportunities

TV-Radio Broadcast Technician
Color Television Specialist
Radar Operator • Laboratory Technician
Airline Radio Man • Computer Specialist
Quality Control Manager
Your Own Sales & Service Shop
. . . PLUS MANY OTHERS

YOU GET THE SAME EMPLOYMENT SERVICE
that has helped thousands of our graduates toward fine careers in Electronics.



Build over 300 practical projects from many shipments of Radio-Electronic parts. You build and operate TV-Radio circuits . . . wireless microphone . . . and many other major projects—all designed to provide outstanding practical experience at home.

Send for FREE BOOKLET TODAY!

Accredited Member of National Home Study Council

"One of North America's Foremost Electronics Training Centers"

DeVRY TECHNICAL INSTITUTE
CHICAGO 41, ILLINOIS

ACT NOW! Get information-packed publication FREE! Mail coupon today.

DeVRY TECHNICAL INSTITUTE
4141 Belmont Ave., Chicago 41, Ill., Dept. MI-1-R

Please give me your FREE booklet, "Electronics in Space Travel," and tell me how I may prepare to enter one or more branches of Electronics.

Name _____ Age _____
PLEASE PRINT
Street _____ Apt. _____
City _____ Zone _____ State _____

2046 Canadian residents address: DeVry Tech of Canada, Ltd. 970 Lawrence Avenue West, Toronto 19, Ontario

FREE!

Trial lesson in DRAFTING

LEARN AT HOME IN SPARE TIME

Check the want ads in any newspaper—SEE the big-pay opportunities open to you as a draftsman. What's more, you can learn this well-paid, prestige profession at home—quickly, easily! No special talent needed! Get complete, step-by-step Chicago Tech lessons in the mail, spend a few pleasant hours studying each week. In a short time you'll be a well-trained draftsman, ready to take your pick of many good jobs. Act now!

FREE INFORMATION—MAIL COUPON TODAY!

Get FREE TRIAL LESSON plus information about C.T.C. practical training. Learn what successful Chicago Tech graduates say about high pay and opportunities in drafting. No charge, or obligation.

Accredited National Home Study Council

CHICAGO TECHNICAL COLLEGE

A-285 Tech Bldg., 2000 So. Michigan Ave.
Chicago 16, Illinois

Mail me FREE Lesson with information about big opportunities in DRAFTING.

Name..... Age.....

Address .....

City..... Zone.... State.....

NOW! ACCORDIONS UP TO ½ OFF

retail prices of comparable accordions

IMPORTER TO YOU!

Buy DIRECT from World's Largest Dealer. Compare our low Importer-to-You prices . . . see how much you save! All famous Italian makes . . . over 30 models . . . latest features, new colors! Small down payment—amazingly E-Z terms. 5-day FREE Playing Trial. 100% customer satisfaction assured. *Free Bonus Gifts* for promptness. Trade-ins welcomed—free appraisal. Rush coupon for new color catalogs. No obligation. Write

5 DAY FREE TRIAL

ACCORDION CORPORATION OF AMERICA
2003 West Chicago Avenue
Dept. MX-11, - Chicago 22, Illinois

ACCORDION CORPORATION OF AMERICA
Dept. MX-11 2003 W. Chicago Avenue, Chicago 22, Illinois
Rush Color Catalogs and "Importer-to-You" prices on famous-make accordions . . . FREE.

NAME.....

ADDRESS.....

CITY..... Zone..... STATE.....

Shrinks Hemorrhoids New Way Without Surgery Stops Itch – Relieves Pain

For the first time science has found a new healing substance with the astonishing ability to shrink hemorrhoids and to relieve pain – without surgery.

In case after case, while gently relieving pain, actual reduction (shrinkage) took place.

Most amazing of all – results were so thorough that sufferers made astonishing statements like "Piles have ceased to be a problem!"

The secret is a new healing substance (Bio-Dyne®)—discovery of a world-famous research institute.

This substance is now available in *suppository* or *ointment form* under the name *Preparation H®*. Ask for it at all drug counters.

High School Course at Home

Many Finish in 2 Years

Go as rapidly as your time and abilities permit. Course equivalent to resident school work — prepares for college entrance exams. Standard H. S. texts supplied. Diploma. Credit for H. S. subjects already completed. Single subjects if desired. High school education is very important for advancement in business and industry and socially. Don't be handicapped all your life. Be a High School graduate. Start your training now. Free Bulletin on request. No obligation.

American School, Dept. H128, Drexel at 58th, Chicago 37

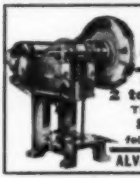
MAKE MONEY! REPAIR HYDRAULIC JACKS

Earn While You Learn At Home

Make up to $5 an hour, full or part-time, in the competition-free field of Hydraulic Jack Repair. Millions of jacks in auto service stations, truckers, body shops, riggers, farms, need servicing. We show you HOW. Easy step-by-step directions

Write for Folder no. 1-2 and Free Bonus Offer

Institute of Hydraulic Jack Repair
P. O. BOX 50 • BLOOMFIELD, N. J.
A Correspondence School Licensed by N.J. Bd. of Ed.



Heavy Duty Type ALLEN PUNCH PRESSES

Model B-2
2 ton - $97.50
Tilting model
$127.50
fob—less motor

Hundreds of Different Model Combinations
1 to 25 ton Capacities
Moderate in price
Fully guaranteed

See your supply dealer or write for Free catalog giving complete information and prices on our Heavy Duty Punch Presses.

ALVA ALLEN INDUSTRIES, Dept. MI, Clinton, Mo.

FREE

MUSCLE BUILDING INFORMATION

Sensational New Methods

Less Time—Less Effort—Better results

BODY-TONE, Box 8388, North Miami 61, Fla.

BUILD, FLY ONE-MAN COPTER!

Fun to build, inexpensive, easy to fly. Factory kits available. Order 3-view drawings, specs, photo of Gyro-Copter $2 or simpler copter Glider $1. Send now to:

BENSEN AIRCRAFT CORP., Dept. MI-11
Raleigh-Durham Airport, Raleigh, N. C.

NAME.....

ADDRESS.....

Did you give up too soon?

Did you quit school too soon? Are you stuck with a low-pay job just because you don't have a technical education? Millions of unskilled men are in the same boat. But, unlike the others, you can do something about your future. You can train at home in spare time for a better job, higher pay and lifelong security. Opportunities are best in the Air Conditioning and Refrigeration field. So rapidly is the industry expanding that 20,000 service technicians must be trained each year. Let CTI qualify you for a rewarding career!

To men who want to make a fresh start

Opportunities are great for success in

Air Conditioning and Refrigeration—

Train at home in spare time

As part of your training, you receive all parts to build a ¼ h.p. heavy-duty, commercial-type condensing unit. You also get a set of professional quality mechanic's tools and gauges. You experiment with this equipment, get practical experience as you train, before you graduate. After unit is assembled, you may build an air conditioner, freezer, refrigerator or milk cooler. Only CTI sends operating kits. No extra charge!

Air Conditioning is now America's finest opportunity field. The government reports that during the past 12 years, production increased 400 per cent. No other industry did better! Over 8,200,000 domestic and industrial units are produced annually. Already 150,000,000 are in use. Despite this fabulous growth, Air Conditioning is said to be in its infancy! There are more opportunities for advancement—and less competition for good jobs—than perhaps in any other field. You are needed.

Get experience as you train

A famous "mechanics" magazine made a survey of home study school graduates. The editors found that 90% got pay raises, 42% earned promotions, and 17% started businesses of their own. CTI home study offers other advantages. You keep your present job as you train. You live with your family. You set your own pace, select study hours most convenient for you. You also get truly personalized instruction. Best of all, CTI sends practical training kits—to help you get experience as you learn!

Earn money as you learn

The typical CTI student is eager to put his skill to profitable work ona part-time basis. Though most students prefer to tie up with local dealers and repair establishments, a surprising number are independents. The extra cash helps meet training cost. Often there's enough to bank, or invest in more equipment.

Start a business—Be the boss

Armed with knowledge, seasoned with skill acquired through practice on kits, and equipped with tools and gauges, many graduates start out on their own. Some expand into retail stores. Others contract to service taverns, restaurants, food stores and commercial buildings. The more ambitious become air conditioning contractors.

Get the facts—Then decide

Do you have a mechanical inclination to learn Air Conditioning and Refrigeration repair? What are your opportunities for success? How does CTI train men to become qualified technicians and mechanics? What do students think of training? Get detailed, accurate answers to these and many other questions by filling out and mailing coupon below. No obligation. Facts are free. Act today!

These students are making good—Why not you?

"I have a business of my own servicing domestic and commercial refrigerators."—*Paul Humphrey, Colo.* "I made $1,000 while training, and am now a refrigeration man for a dairy."—*Giles Minton, N. C.* "I opened a little shop and am swamped with work."—*Charles Corley, Kan.* "Doing service work on a part-time basis the past 10 months, I earned $2,400. Have a nice business."—*Renos Johnson, Ind.* "My firm advanced me to field superintendent."—*Milburn Dougan, Ark.*

COMMERCIAL TRADES INSTITUTE
A Non-Profit Organization
CHICAGO 26, ILLINOIS

COMMERCIAL TRADES INSTITUTE
1400 GREENLEAF AVENUE
CHICAGO 26, ILLINOIS
DEPT. 8-842

Please rush me your opportunity booklet, *Success in Air Conditioning and Refrigeration;* and *Lesson Samples.* Both free.

NAME_____ AGE_____

ADDRESS_____

CITY_____ ZONE_____ STATE_____

Accredited by National Home Study Council

BIG PAY OPPORTUNITIES

If you like to work with your hands—you should investigate the money-making possibilities which are available today to men who are ready.

You can make yourself more valuable through interesting home study. Others have done it—you can too! You need not lose a dollar of pay or an hour from work. Advanced education unnecessary.

FREE BOOK GIVES THE FACTS

Simply mark on the coupon below the trade which interests you most. Mail it today and we will send you a valuable *free* booklet describing the opportunities in that field and what you must know to get a better job and higher wages. No obligation.

Accredited Member, National Home Study Council

Utilities Engineering Institute Division

LA SALLE EXTENSION UNIVERSITY

A Correspondence Institution

417 S. Dearborn, Dept. 1493E
Chicago 5, Illinois

Please send me full information regarding the training I have checked, without obligation.

- ☐ Diesel
- ☐ Auto Body Fender
- ☐ Motor Tune-up
- ☐ Ref. Air Cond.
- ☐ Welding
- ☐ Mech. Drafting

Name.....*Age*.....

Address.....

City.....*Zone*....*State*.....

It's EASY to be TALLER
Why be Average?

Now you can be dramatically taller...it's just as easy as stepping into a pair of "ELEVATORS"! These amazing shoes instantly **add that all-important height you need to make you a BIG man . . .** give you the boost you need to command the respect of everyone! And it's **your** secret because smartly-styled "ELEVATORS" look and feel just like other fine shoes! **TODAY . . .** send for **FREE BOOKLET** illustrating 34 styles for street, sport and dress.

Brockton Footwear, Inc., Dept. 1001B, Brockton 68, Mass.

THE ORIGINAL AND GENUINE **ELEVATORS**
HEIGHT-INCREASING SHOES
"YOUR PERSONAL PEDESTAL"
IN THE STORE—TAKE ONE OR, INC.

THE ORIGINAL PACKAGED BOAT

KITS

- World's Largest Line—New Fiberglass Hulls. Over 200 styles Boats-Kits, Formed-Hulls, Semi & Custom finished. All types: Prams, Cruisers, Racers, Inboards, Outboards. Easy to build. Professional results. **Dealers - Agents Inquire.**

CREDIT TERMS

Send 35¢ for Colored Catalog
52 pg. Kit Catalog plus 20 pg. Hardware and 8 pg. Armor Glass books.
(SPECIAL OFFER!)
Colored CATALOG plus "Boating Handbook"...all for $1.

★ BOAT PLANS, PATTERNS FRAME PACS

- Over 300 Plans-Patterns-Frame Pak Kits. Prams, Kayaks, Racers, Runabouts, Catamarans, Cruisers, Inboards or Outboards 16' to 30' Wood, Plywood and Steel. *Send 35¢ for 120 pg. Plan Catalog.* Catalog plus "Boat Building Handbook" . . . Send $1.

CUSTOM • CRAFT Buffalo 7N, N. Y.

BARBELLS

100 POUND SET
$12.80
Extra Plates Only 12c Pound

140-Pound, CHROME DeLUXE Barbell-Dumbbell set only $19.80. This is our feature set and is the finest ever manufactured.
Training with adjustable weights is the BEST way to keep fit; the ONLY way to develop great strength and a perfect body. As the oldest and best equipped barbell company, BUR gives value and prices no one can equal.

SEND FOR FREE CATALOG.
BUR BARBELL CO.
Lyndhurst 2, New Jersey

GOVERNMENT OIL LEASES LOW AS $1 PER ACRE

You do no drilling, pay no taxes, may realize a king-size profit without ever leaving home. Free map and booklet. Write to

AMERICAN OIL SCOUTS, Dept. MI
8550 Santa Monica Blvd. Los Angeles 46, Calif.

FREE GUIDE *Reveals 200 Ways to Make Extra Money*

YOU can turn your spare hours into cash ($25.00 to $100.00 a week)! Ask for FREE SUBSCRIPTION to OPPORTUNITY MAGAZINE, nationwide guide to extra cash for millions of men and women. Contains hints, plans, hundreds of offers. No matter what your age, experience, or occupation—write TODAY for next 5 issues FREE. Send no money—just your name. **Opportunity, 850 N. Dearborn, Dept. 306, Chicago 10, Ill.**

MAKE $25 TO $50 A WEEK CLIPPING NEWSPAPER ITEMS!

Clip newspaper items for publishers. Some clippings worth $5 each. Write for FREE particulars today!

NATIONAL, Dept. 81-MX
Knickerbocker Station, New York 2, N. Y.

RUPTURED
BE *FREE* FROM TRUSS SLAVERY

Surely you want to THROW AWAY TRUSSES FOREVER, be rid of Rupture Worries. Then Why Do you put up with wearing a griping, chafing and unsanitary truss the balance of your life? If you do, it will NOT be through necessity but through choice on your part.

Now there is a new modern **Non-Surgical** treatment that is designed to permanently correct rupture. These **Non-Surgical** treatments are so certain, that a Lifetime Certificate of Assurance is given. Write today for our New FREE Book that gives facts that may save you painful, expensive surgery. Tells **how non-surgically** you may again work, live, play, love and enjoy life in the manner you desire. There is no obligation.

Excelsior Medical Clinic, Dept. H5124, Excelsior Springs, Mo.

Are you the kind of guy who loves to "tinker" with things?

And are you completely satisfied with your present kind of work, income, prospects? If these questions "hit home," here's a big fact to realize: OVER 400 MILLION electrical appliances are in use in American homes — and are increasing by 76 MILLION a year! Men trained to service them are cashing in on this "Electrical Appliance Boom" — making $3 to $5 an hour, spare time or full time. It will pay you to send for the FREE BOOK telling how you can quickly and easily get into this profitable field.

EARN WHILE YOU LEARN

with this APPLIANCE TESTER—Yours at No Extra Charge

Your NRI Course comes *complete* with all the parts to assemble a sturdy, portable Appliance Tester that helps you earn while you learn. Easy-to-follow manual tells how to assemble and use the Tester *right away*. Locate faulty cords, short circuits, poor connections, etc. in a jiffy; find defects in house wiring, measure electricity used by appliances; many other uses.

With this Tester you save time and make money by doing jobs quicker, making sure appliances operate correctly after repairs.

YOU'RE NOT TOO HAPPY in your present job — right? Not enough money. Work not interesting enough. Don't like the people you work with.

What you *really* enjoy is puttering around the house, getting things shipshape. Fixing that doorbell or squeaky hinge. Putting a new washer in that leaky faucet. Getting the motor of that balky power lawn mower to run smooth as silk.

And sometimes you wonder, "Why can't I do something like this all the time? Why can't I get PAID for doing what I really enjoy — instead of what bores me? Why can't I start some sort of little home business that would be fun and profitable?"

This Is "Made to Order" for You

If that's the kind of fellow you are, here's a little business that's "made to order" for you. Servicing Electrical Appliances. No big investment or elaborate equipment needed. A few simple hand tools are all you need — and a corner of your basement or garage to work in.

Plenty of money to be made — $3 to $5 an hour, in spare time or full time. At that rate, you may soon find it will pay you to open up your own Appliance Repair Shop. Then you're completely your own boss. Maybe even end up having other fellows work for *you!*

Why the Boom in Appliances Means Money in Your Pocket

In addition to the 400 MILLION electrical appliances *already* in use in American homes, this year alone will see sales of 76 million *new* appliances! For example, 4,750,000 new coffee makers, 2,000,000 new room air conditioners, 1,425,000 new clothes dryers. And now that Americans have become so absolutely dependent on these electrical aids, they are dependent on the men who can service them. As a trained Appliance Service Technician, you will be needed — respected — well paid.

Don't worry about how little you may now know about electricity. That's where we come in. We'll train you at home, in your spare time, using methods proven successful for over 45 years. We start from scratch, TELL you clearly and SHOW you in pictures everything you need to know. Your training will cost you less than 20¢ a day — and you can earn while you learn.

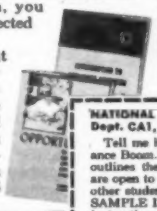
CASH IN ON THE BIG BOOM IN ELECTRICAL APPLIANCES

The coming of the auto created a multi-million dollar service industry, the auto repair business. Now — with 400 MILLION electrical appliances in American homes — the same thing is happening in *that* field. No wonder that men who know how to service them properly are making $3 to $5 an hour — in spare time or full time!

FREE BOOK
and Sample Lesson

Our 24-page Free Book will open your eyes to a whole world of new opportunities. Tells how you can "cash in" on America's "Electrical Appliance Boom" — the money our students are making, what they say about us.

Free Sample Lesson shows how simple and clearly illustrated our instruction is — how it can quickly prepare you for a profitable future in this big field. Just mail coupon, letter, or postcard to: *National Radio Institute, Dept. CA1, Washington 16, D.C.* (No obligation — and no salesman will call on you.)



NATIONAL RADIO INSTITUTE
Dept. CA1, Washington 16, D.C.

Tell me how I can "cash in" on the "Electrical Appliance Boom." Send me your illustrated FREE BOOK that outlines the whole NRI Course, tells what opportunities are open to me, answers my questions, describes success of other students, and much more. Also send me the FREE SAMPLE LESSON so I can see how clear and easy your instructions are. I am particularly interested in:

☐ Spare Time Earnings ☐ Business of My Own ☐ Better Job

I understand there is no obligation on my part; and no salesman will call on me.

Name.....

Address.....

City.....Zone....State.....

Accredited Member National Home Study Council

Earns $510 in One Month's Spare Time

"In one month I took in approximately $648 of which $510 was clear. I work only part time. I do a lot of service calls on ranges, dryers, and other major appliances . . . The NRI course has been priceless to me."—*Earl Reid, RFD 1, Thompson, Ohio.*

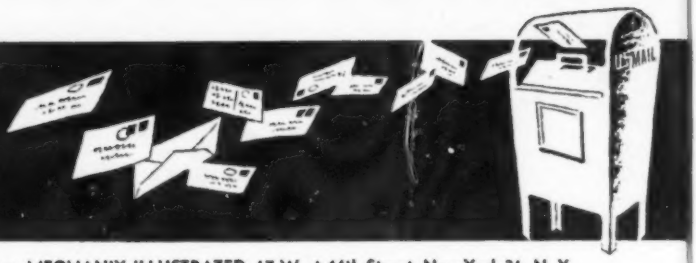
Business A Success

"Since taking your course I have opened up a small repair shop. At present I am operating the shop on a spare time basis — but the way business is growing it will be a very short time before I will devote my full time to the shop." — *J. O. Stinson, 1506 Poinsettia St., Long Beach, Cal.*

More Than Doubled Cost of Course

"I had practically no knowledge of any kind of repair work. Now I am busy almost all my spare time — and have more and more repair work coming in. I have my shop in basement. I have made more than double the cost of training." — *John D. Pettis, 172 N. Fulton, Bradley, Illinois.*

Dear Editor



Address mail to: Letters Editor, MECHANIX ILLUSTRATED, 67 West 44th Street, New York 36, N. Y.

● *Unbuckling To Unlock*

I would be embarrassed to use the Car-Key Belt described in your Bright Idea page (Sept. '60 MI). It's a Bright Idea, all right, but the trouble is you have to undress to use the key, which is the tongue of the belt buckle. I would not like to have a cop spot me unlocking.

Inhibited
South Bend, Ind.

● *Corporal Punishment*

Have just read the article in the October issue entitled This Will Tickle You. Back in 1943 we had a ticklish corporal named Joe. When he was sound asleep we would just make tickling motions about three inches from the soles of his feet and he would jerk them back as though he really could feel us tickling him.

Alfred Vasko
Swanton, Ohio

● *Coffee Correction*

In your August issue you imply the automatic coffee machine pictured in It's New is a German invention using powdered coffee. Actually this is an American invention using freshly-ground coffee and water at 210°. Since 1946 when our company invented the automatic coffee-vending machine, Lloyd Rudd and I were pointing for the day when we could offer the public a machine that would brew each cup individually from fresh grounds and serve it within ten seconds after the coin is inserted. Last year we achieved this goal and we sent one of our machines to the International Restaurant Show in Hamburg, Germany, where the picture you used was taken. We hope you will advise your readers that this is an American invention and that small business can still succeed here in America.

R. C. Melikian
Vice President
Rudd-Melikian, Inc.
Hatboro, Pa.

● *Small Magnets*

Some time ago numerous magazines carried ads for small magnets. But now, since I am conducting an experiment requiring such magnets, I cannot find ads for magnets. Can you tell me where I can purchase them? Also how permanent are these so-called permanent magnets, and will attractable metal become magnetized?

O. C. Carleton
Toledo, Ill.

Try Edmund Scientific Co., 101 East Gloucester Pike, Barrington, N. J. We have been using some small magnets for five years and they still hold on tight. Magnetism does not last in metals that have been near magnets.

● *Late Late Lovers*

My girl and I like to watch the Late Late Show but don't like to wake her folks up. Could we both listen to a pillow speaker like the one MIMI is using on pg. 60 of the Oct. MI?

R.B.
Bronx, N. Y.

If it's all right with your girl's folks, it's all right with us.

[*Continued on page* 14]

What keeps YOU from making more MONEY?

Just what is the matter—why aren't you making more money? Look around—probably many of the people you know are doing a lot better than you. What is the reason?

Your own native ability is probably just as good as theirs—your personality and appearance are probably just as good.

But—they have something you lack—the fact that they have a better job and earn more money proves that. Success today is measured by the dollar sign.

The secret is this—the man or woman who prepares and trains for the job ahead is the one who gets the advancement and more money. The person who really has something on the ball doesn't need "Pull" —"Push" is the thing that enables him to get what he or she wants.

Ambitious men and women have found the proved and tested way to get ahead in life—through LaSalle training. Hundreds of thousands of students have enrolled—our files are full of grateful letters from people who have bettered their earnings and position through LaSalle training.

Perhaps we can help you. You should at least get all the facts to judge. The coupon will bring full information FREE. Just check the field of your choice and we'll send you, without obligation, full information on that field—the money making possibilities and how you can prepare in your spare time at moderate cost.

So—if you are interested in a brighter, more profitable future, send the coupon TODAY—you may forget tomorrow.

ACCREDITED MEMBER, NATIONAL HOME STUDY COUNCIL

LaSalle Extension University, *A Correspondence Institution*, 417 South Dearborn, Dept. 1493X, Chicago 5, Illinois

Please send me, without cost or obligation, FREE catalog and full information on the field I have checked below:

ACCOUNTING
- ☐ Modern Bookkeeping
- ☐ Basic Accounting
- ☐ Practical Accounting
- ☐ Principles of Acctg.
- ☐ Cost Accounting
- ☐ Federal Income Tax
- ☐ Accounting Systems
- ☐ Business Law
- ☐ Auditing Procedure
- ☐ Controllership
- ☐ CPA Training
- ☐ Complete Accounting

TRAFFIC & TRANSPORTATION
- ☐ Organization & Mgt.
- ☐ Classifications, Rates & Tariffs
- ☐ Transportation Agency & Services
- ☐ Transportation Law & Regulation
- ☐ Rate Making & Rate Cases
- ☐ Complete Traffic & Transportation

LAW
- ☐ Law of Contracts
- ☐ Insurance Law
- ☐ Claim Adjusting Law
- ☐ Law for Trust Officers
- ☐ Business Law I
- ☐ Business Law II
- ☐ General Law
- ☐ First Year Law
- ☐ American Law and Procedure (LL.B. Degree)

BUSINESS MANAGEMENT
- ☐ Principles of Management
- ☐ Psychology in Business
- ☐ Selling & Sales Management
- ☐ Advertising and Marketing
- ☐ Production Problems
- ☐ Business Financing
- ☐ Credits and Collections
- ☐ Office Management
- ☐ Managing Men
- ☐ Accounting & Statistical Control
- ☐ Business Correspondence
- ☐ Organization & Reorganization
- ☐ Legal Problems
- ☐ Complete Business Management

MANAGEMENT COURSES
- ☐ Basic Management
- ☐ Production Management
- ☐ Sales Management
- ☐ Advertising & Sales Promotion
- ☐ Financial Management
- ☐ Personnel Management
- ☐ Sales & Executive Training
- ☐ LaSalle Sales Training
- ☐ Foremanship Training

HIGH SCHOOL
- ☐ High School Preparatory
- ☐ General Business Course
- ☐ High School Diploma
- ☐ Commercial Course
- ☐ Secretarial Course
- ☐ Home Management Course
- ☐ General Culture Course
- ☐ Science Course
- ☐ Mechanical Course

DENTAL ASSISTANT
- ☐ Dental Assistant

TECHNICAL COURSES
- ☐ Auto Body Fender
- ☐ Refrigeration-Air Conditioning
- ☐ Diesel
- ☐ Drafting
- ☐ Welding
- ☐ Motor Tune-up

STENOTYPE
- ☐ Machine Shorthand

Name.....Age.....

Address.....

City, Zone, State.....

CHECK THIS COUPON AND MAIL TODAY...SURE!

REVOLUTIONARY NEW
DESIGN SAVES YOU $20 TO $40

4 1/8" JOINTER PLANER

NEVER BEFORE POSSIBLE AT SO LOW A PRICE

NOW ONLY $19.95

(shipped complete as shown)

SOLD DIRECT FROM FACTORY

Patents pending on revolutionary new engineering developments make this bargain possible. This is a power plane with all the features of machine tools costing 3 times OUR PRICE. It planes, rabbets, bevels, aids beveling and glueing joints; is so rugged and durable we guarantee it unconditionally for ten years.

SEE THESE QUALITY FEATURES

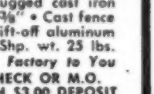
All cast iron and steel construction • Balanced steel cutter head • Hardened and ground knives • Precision ground cast iron tables • Rugged cast iron base • Table depth adjustable 0" to 3/8" • Cast fence with single action cam lock • Pat. lift-off aluminum guard • Big, full size—22" long • Shp. wt. 25 lbs.

Order By Mail — Sold Direct From Factory to You

OUR 30TH YEAR — SEND $19.95 CHECK OR M.O. SENT C.O.D. WITH $3.00 DEPOSIT

(If not completely satisfied after ten days return for full refund.) Shipped express collect.

AMERICAN MACHINE & TOOL CO., INC.
ROYERSFORD 28, PENNSYLVANIA



For instant 2-way Wireless Communication with car, home, boat, office, factory or farm

now—a low cost WALKIE-TALKIE for everyone, everywhere

- Talk & listen to persons up to a mile away
- As easy to use as a telephone—just push a button
- Completely portable hold it in the palm of your hand
- No tests, licenses, or age limits
- Handsome in aluminum and black simulated leather
- Buy it in easy-to-build kit form or factory assembled

Kit Only $32.95 each
$84.95 pair
Factory Assembled
$50.95 ea. $99.95 pr.

HEATHKIT by DAYSTROM

Mail coupon today for complete information and Free Heathkit Catalog

HEATH COMPANY
Benton Harbor 7, Michigan

NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____

Dear Editor

[*Continued from page* 12]

• *Epoxy Cement*

I was about to purchase a new motor block for my two-cycle Clinton engine, as I had thrown a rod through the case. Then I read your article on Epoxy Cements and decided to try it. I drilled small holes (approx. 1/16" in diameter and 1/8" deep) with a small center drill, then inserted wires to form mesh across the hole. Then I placed cardboard inside crankcase against broken area and inserted packing to hold in place. I then filled in broken area from outside with Epoxy Cement and let dry 24 hours. I reassembled engine and received satisfactory results. There are quite a few of these broken crankcases around and I thought possibly your readers would be interested in knowing they can be repaired with this cement.

Jack Organ
Wheeling, W. Va.

• *Bold Farm Program*

Senator Mundt is not going to solve the farm surplus glut through the methods outlined in the MI of Sept. '60. The good Senator suggests: "If we but use the brains of some of our jet-age scientists in an agricultural Manhattan Project that includes both creative and marketing research we can bring to American homes a flood of new products that will stagger the imagination." Why should I be enthusiastic about a flood of new products? A better solution would be to export our surplus farmers. Since the American taxpayer is being bludgeoned from too many efficient farmers and there is a dearth of them in India, South America and so on, I suggest that the path should be cleared for the easy migration of this segment of our population to other countries.

Frank Seidle
Idyllwild, Calif.

Our Uncle Herman will love this. He's the most inefficient farmer in Somerset County.

[*Continued on page* 16]

"I call it a bad day if I don't make $25 before noon"

(This chair alone brought $4.50 with twenty-five minutes work and 32¢ in cleaning materials.)

by Harold Holmes

"Just a few months ago I made the big move. I gave up my job and started spending all my time in the little business I had been running on the side. It wasn't an easy decision, but, now I'm tickled to death I made it. Not just because I'm my own boss or because I have an excellent chance of making over $10,000 this year. It goes deeper than that.

"You see, this idea has caught on like wildfire in my town. Not a day goes by without my phone ringing with women calling for appointments. The beauty of it is that once a woman becomes my customer, she calls back year after year. Not only that, she tells her friends, too, and they call me. Before I know it I'm swamped with work. (And at $7.50 an hour net profit it doesn't take long before my bank account is really mushrooming.)

"Funny thing, but back last year, before I started, I never realized the money there was in this business waiting for someone to come along and collect it. Just think: every house in town has furniture and most have rugs or carpeting. I concentrate on just the better homes and have more work than I can handle. You know why? Because women are fussy about their furnishings. Can't stand to see them dirty. That's why they call me over every year.

"The average job is worth $25.00 to me and takes a little over 2 hours. Out of this, after paying for materials, advertising and other expenses I net about $15.00 clear profit. This means I need just 3 jobs a day to clear $11,250.00 in a year. Frankly, since this will be my first full-time year I'll be glad to hit the $10,000 mark. But after that this business should grow larger each year until I have to hire men to help me handle the business.

Personally Trained

"Believe me there's nothing magic about it. I didn't know a thing about cleaning home furnishings before I became a Duraclean dealer. But after my application was accepted, I was trained in their factory-training school and by a dealer in a nearby town. I was astonished by the short time it took me to become an expert. Actually, much of the credit must go to the Duraclean process, which is so safe it has earned the Parents' Magazine Seal.

"The portable machine you see is just one of the electrical machines I use. It manufactures a light aerated foam with a peculiar action chemists call 'peptizing'. It means that instead of being scrubbed deep into the fabric, dirt is gently ABSORBED by the foam, leaving the fabric clean all the way down. Women can't believe their eyes when they see how it works. Colors appear bright again, and rug pile unmats and rises like new. I don't have to soak rugs or upholstery to get them clean, which ends the problem of shrinkage, and means the furnishings can be used again the very same day. This alone has brought me a lot of customers.

"As a Duraclean dealer I make money with four other services, too: ***Duraproof*** . . which makes furnishings immune to moth and carpet beetle damage (it's backed by a six year warranty). ***Duroshield,*** a brand new dirt-delaying treatment. It coats fabrics with an invisible film that keeps dirt out. ***Duraguard,*** another new service, flameproofs draperies, upholstery and carpets to reduce charring and the tendency of fires to flame up. And ***Spotcraft,*** which consists of special chemical products for removing stubborn spots and stains. On jobs where I perform all five services, I multiply profits!

"One of the nicest things about being a Duraclean dealer is that I get continuous help from Duraclean Headquarters. My services are nationally-advertised in famous magazines like McCall's, House Beautiful and many others. I also get a complete advertising kit prepared by experts. (There's even a musical commercial!) I get a monthly magazine full of methods to build business and I can meet with other dealers at Duraclean conventions. I'm also backed by insurance. In fact there are over 25 regular services I get under their unique System.

No Shop Needed

"Maybe you too would like to break away from your job and make a fresh start in a business of your own. Do you need a shop? Certainly not. I operate from home. Need a lot of money to start? Not at all. Duraclean finances reliable men, after a moderate down payment, and furnishes enough supplies to return your TOTAL investment.

"You get everything you need: equipment, supplies, advertising matter, personal training, and regular help from Headquarters. To get all the details, fill out the coupon. There's no obligation and you can *decide for yourself.* I'll say one thing: if you DO become a Duraclean dealer, you'll be glad the rest of your life that you took time today to write."

Irl H. Marshall, Jr., International Headquarters
Desk 1-171 839 Waukegan Avenue, Deerfield, Ill.

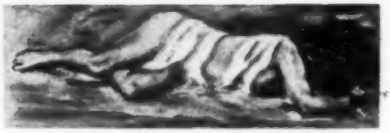
IRL H. MARSHALL, Jr., International Headquarters
Desk 1-171 839 Waukegan Avenue, Deerfield, Ill.

I'm interested in owning my own business. Please send illustrated booklets and full details FREE outlining the Duraclean Dealership Program and territory arrangement.

Name_____
Please print

Address_____

City_____ State_____



DO YOU LIKE ART?

Draw for Money! **Train at home for career or lifetime hobby—only 20¢ a day.**

YOU don't have to be a "genius" to break into the high-paying art field. Now, through our famous simplified course, you can learn commercial art, painting, cartooning, fashion, TV art, etc. . . . right at home, in your spare time. And all for only 20¢ a day!

No previous Art training needed. You start with simple fundamentals—progress rapidly through personalized step-by-step instruction. Soon be your own boss. Or earn good money as staff artist for advertising agency, newspaper, magazine, etc. Even earn while you learn. TWO 22-piece art outfits given AT NO EXTRA COST.

FREE BOOK tells about the opportunities in Art as a profession or hobby; describes famous low-cost WSA Course in detail; also tells of success of our students. Send for it TODAY. No cost or obligation. No salesman will call upon you. Just send this ad, with your name and address filled in below to **Washington School of Art, Studio 101, Port Washington, N. Y.** *(Estab. 1914—Licensed by the N. Y. State Education Dept.)*

Name..... Age.....

Address .....

City..... Zone..... State.....

MAKE UP TO 2500% PROFIT! 100,000 ITEMS!

DO PACKAGING at HOME for STORE DISPLAY RACKS

NO SELLING! All you do is package! Cash in on skyrocketing new "help-yourself" rack business! Package wanted items in see-thru bags at home! We show you how, help you step-by-step, supply materials. Our nationwide sales force places your products in stores and services racks. We show how and where to buy in bulk far below wholesale. Your profits are fantastic on products you package.

HERE'S PROOF that Packaging means Big Profits for You!

Item Per Box	Bulk Cost	Sells For
Safety Pins	2½¢	15¢
Bathmats	3½¢	19¢
Fish Hooks	2¢	98¢

Make profits like these on over 100,000 other products you can package right in your own home. We show you how!

START SPARE TIME—LIVE ANYWHERE!

Get orders and deliver by mail! Live in city, town, farm. Start at home, spare time. Later, go full time, hire others. Simplest, fast-growing Home Business.

FREE "10-STEP PACKAGING PROFIT PLAN"

Reveals how to cash in on high-profit Home Packaging Business. FREE DETAILS. No obligation. Rush name & address to

WRITE **HOME PACKAGING CO. – Dept. T261**
2212 Jesse Street, Los Angeles 23, Calif.

Dear Editor

[*Continued from page* 14]

• *Brick Cleanser*

What kind of acid do contractors use to clean brick? And how much water to a gallon of acid?

Morris L. Suiter
Woodlawn, Tenn.

Muriatic Acid (a trade term for hydrochloric) is the stuff. They use a 20 per cent solution—which means you'd add four parts of water to one part of acid.

• *Survival Kit Suggestion*

I was very much interested in the article on pocket-sized survival kits in the Oct. MI. I have made several pocket-sized survival kits and I always carry one in my pocket on our hikes in the San Bernardino Mountains near here. I always include about two dozen water purification tablets. This is enough to treat a dozen canteens of water. The ones I use are made by the Park Drug Co of New York City.

Roger A. Kowalski
Fontana, Calif.

• *Hiccups Again*

While in bed, not so well, I was given a copy of MI, dated Sept. 1958. Re Lawrence Sanders' article on Hiccups. I am sorry to see such odd devices and deceptions used to get rid of this annoying ailment. There really is a cure for this trouble, which is 100 per cent foolproof. Try it yourself at the first opportunity. This is the simple procedure: A glass of water handy? Now tell the victim to exhale all breath and immediately insert his little fingers hard into eardrums. Instantly take glass of water and tell sufferer to drink, and let them drink until they are forced to stop for breath. Remove fingers from ears, and it will be a long time hence ere hiccups bother them again. This is in all sincerity and is, as I say, 100 per cent fool proof. If you could get this article to your American office, perhaps I may have saved the day for many a sufferer over there.

Donald M. Conway
Hamilton, Lanarkshire
Scotland

When answering advertisements please mention
MECHANIX ILLUSTRATED

WHAT ALL AUTO MECHANICS WANT TO KNOW

This Big Practical Book gives full information, with working diagrams, covering the principles, construction, ignition, service and repair of modern cars, trucks and buses.

Air Conditioners, Hydramatic & Fluid Drives Fully Explained.

A complete guide of 1132 Pages, with over 1000 Illustrations showing inside views of mechanisms, parts, with instructions for service jobs. Completely up-to-the-minute! Priced at only $6.

CIRCLE No. 1 IN COUPON

HOW TO FIX HOME APPLIANCES

REFRIGERATORS WASHERS — TOASTERS DRYERS — IRONERS RANGES — VACUUMS FREEZERS

Mostly other GAS AND ELECTRIC APPLIANCES

Handy Reference for Electric & Gas Servicemen, Mechanics, Dealers and Homeowners. Explains clearly and simply how to locate trouble, how to test, reassemble and connect. Wiring diagrams. 1000 Facts. Easy to read. Answers ALL your questions. 864 Pages. Illustrated. Only $6.

CIRCLE No. 2 IN COUPON

TV RADIO SERVICE LIBRARY

TELLS HOW TO ANSWER RADIO T.V. QUESTIONS

HERE IS LATE INFORMATION IN A HANDY FORM FOR RADIO AND TELEVISION REPAIRMEN, SERVICEMEN AND STUDENTS

TWO COMPLETE VOLUMES—1568 Pages—1085 Illustrations and Diagrams. 1001 Important Facts and Figures on Modern T.V., Radio, Electronic Devices. INCLUDES TRANSISTORS & Transistors Circuits, Rectifiers, Record Changers, P.A. Systems, Phonograph Pick-ups, F.M., Auto Radio, Short Wave, Basic principles, Construction, Installation, Operation, Repairs, Trouble Shooting, How to get Sharp, Clear T.V. Pictures, Install Aerials, How to Test. Explains COLOR SYSTEMS, Methods of Conversion, Terms, etc. Includes Ultra High Frequency. Quick ready reference or use as a home study course. Only $6 for BOTH volumes.

CIRCLE No. 3 IN COUPON

OIL BURNERS

New, complete, explaining in detail both domestic and industrial oil burners. Includes electrical hook-ups and wiring diagrams. Fully covering the theory, construction, installation, operation, testing, servicing and repair of all equipment. Indexed for ready reference. Over 416 Pages. 320 Illustrations and Diagrams. Only $3.50

CIRCLE No. 28 IN COUPON

ALL TYPES OF BLUEPRINT READING

How to read scales, the standard symbols, detail and assembly prints, working drawings, short cuts, helps, hints and suggestions. THE MAN WHO CAN READ BLUEPRINTS IS IN LINE FOR A BETTER JOB. This book gives you the secret language, step by step in easy stages. 448 Pages, Very Fully Illustrated. Priced at $3.

CIRCLE No. 25 IN COUPON

PLUMBERS AND STEAMFITTERS GUIDES

Practical Trade Assistant & Reference Set. Explains in plain language and by clear illustrations, diagrams, charts, graphs and pictures the principles of modern plumbing practice including Pipe Fitting and Air Conditioning. 4 Vols.—2624 Pages—3442 Diagrams & Illustrations. Only $9 for the complete set of 4 vols.

Sold individually $2.50 each.

CIRCLE No. 6 IN COUPON

7-DAY FREE EXAMINATION

SEND NO MONEY—Pay the postman nothing! We are glad to send you any of the Audel Guides for absolutely FREE examination in your own home. We take all the risks and leave all the decisions up to YOU. There is no obligation! If you decide to keep the books of your choice you may pay for them under our astounding easy-pay plan of only $2 a month.

HERE IS ALL YOU DO

IT'S EASY TO ORDER: In the No-Risk Mail Order Coupon at the right just draw a circle around the number of Audel Guides you want us to send you for FREE EXAMINATION. We will send them to you at once to help you build a brighter future by increasing your SKILL. If for any reason at all you are not COMPLETELY satisfied, return the books to us, and that will end the matter!

NO STRINGS OR CATCHES TO THIS OFFER.

THEO. AUDEL & CO.
49 West 23rd Street, New York 10, N.Y.

CARPENTERS AND BUILDERS GUIDES

PRACTICAL STOREHOUSE OF MODERN CONSTRUCTION INFORMATION (4 vol. set) for carpenters and all woodworkers. Explained in easy language and by profuse illustration principles, advances, short cuts, trade secrets, all based on the NEWEST information. Vol. 1—Tools, steel square, saw filing, joinery, furniture, etc.; Vol. 2—Builders' mathematics, drawing plans, specifications, estimates, etc.; Vol. 3—House and roof framing, laying out, foundations, etc.; Vol. 4—Doors, windows, stair building, millwork, painting, etc. 4 vols. 1904 Pages. 3700 Illustrations. Whole set only $9. CIRCLE No. 8 IN COUPON

Sold individually $2.50 each.

PRACTICAL ELECTRICITY

A COMPLETE HANDBOOK—Quick, simplified, ready reference. Complete instruction and practical information on the rules and laws of electricity—Maintenance of Machinery—A.C. and D.C. Motors—Armatures—Wiring Diagrams—House Lighting—Power Wiring—Meters—Batteries—Transformers—etc. Simple to understand. 1052 Pages. 2000 Illustrations. Priced at $5. CIRCLE No. 4 IN COUPON

DIESEL

ALL THERE IS TO KNOW ABOUT MODERN DIESEL ENGINES—Basic principles, starting valves, timing, fuel pumps, fuel injection compressor, air compressors, pistons, cylinders, lubrication, cooling systems, etc. Answers on operation, calculations. 640 Pages. Fully Illustrated. Priced $3.

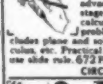
CIRCLE No. 9 IN COUPON

MASONS & BUILDERS GUIDES

A PRACTICAL ILLUSTRATED 4 VOL. SET—Explaining in clear, simple language and profuse illustration, principles, advances, short cuts, trade secrets, based on modern practice—including how to figure and calculate various jobs. Vol. 1—Brick work, bricklaying, bonding, designs. Vol. 2—Brick foundations, arches, tile setting, estimating. Vol. 3—Concrete mixing, placing forms, reinforced stucco. Vol. 4—Plastering, stone masonry, steel construction, blueprints. 4 Vols. 1440 Pages. 2087 Illustrations. Complete Set only $9.

CIRCLE No. 26 IN COUPON Sold individually $2.50 each.

MATHEMATICS MADE EASY



A COMPLETE HOME STUDY COURSE—Starting with the first principles of arithmetic, advancing step by step through the various stages of mathematics, including the rules and calculations for mechanical and electrical problems. New EASY correct methods. Includes plane and solid geometry, trigonometry, algebra, calculus, etc. Practical tests, reference tables and data. How to use slide rule. 672 Pages. 550 Illustrations. Priced at only $3.

CIRCLE No. 11 IN COUPON

NEW MACHINISTS AND TOOLMAKERS HANDBOOK

MODERN MACHINE SHOP PRACTICE — For every machinist, Toolmaker, Draftsman or Student. Tells how to set up and operate lathes, screw and milling machines, shapers, drill presses and all other machine tools. A COMPLETE INSTRUCTOR AND REFERENCE BOOK 1250 Pages. Fully Illustrated. Priced at only $6.

CIRCLE No. 12 IN COUPON

ELECTRIC MOTORS

THIS GUIDE covers the construction, hookup, control, maintenance and trouble shooting of all types of motors. Includes armatures, winding. Explains entire subject in great detail in simple language. Over 1056 Pages of information. 617 Diagrams. All types of motors, fully illustrated and indexed for ready reference. Priced at only $5.

CIRCLE No. 27 IN COUPON

REFRIGERATION & AIR CONDITIONING

FOUR BOOKS IN ONE—basic principles, servicing, operation, repair of: 1. Household Refrigeration. 2. Special Refrigeration Units. 3. Commercial & Industrial Refrigeration. 4. Air Conditioning Systems. A GOLD MINE of essential information. Completely up-to-date. 1300 Pages. Fully Illustrated and Indexed. Priced at only $6. CIRCLE No. 14 IN COUPON

New MECHANICAL DICTIONARY

THE AUTHORITATIVE WORK BOOK FOR MECHANICS TECHNICIANS AND STUDENTS

With the revolutionary progress being made today in all mechanical fields, new words and phrases come into use. Any mechanic who wants to be up to date must know this new trade language.

Audels New Mechanical Dictionary gives you all these new words and also the old. Every mechanic will find his job made easier if he knows the exact meaning and use of technical words that come up every day at work. It is an engineer's shop companion and a student's guide.

PRACTICAL TABLES, FORMULAS, PROCESSES

Constant use of Audels New Mechanical Dictionary will increase your knowledge and skill in a matter of days without any conscious effort on your part. The right word at the right time is like the right tool — be sure you have it and use it! Defines 17,000 words — terms phrases — rules and formulas. 712 pages only $6.95.

CIRCLE No. 44 IN COUPON

THE NEW ELECTRIC LIBRARY

A COMPLETE ENCYCLOPEDIA explaining in the simplest terms the fundamental principles, rules and applications of applied electricity.

A COMPLETE COLLEGE EDUCATION!

Fully illustrated with diagrams and sketches, calculations and tables for ready reference. Questions and answers. Trial tests for practice study and review. All based on the most modern theory.

Vol. 1—Principles and rules of electricity, magnetism, armatures, repairs. No. 15

Vol. 2—Dynamos, DC Motors, construction, installation, maintenance, etc. No. 16

Vol. 3—Testing instruments and tests, storage battery construct. and repairs. No. 17

Vol. 4—Alternating current, power factor, alternators, transformers. No. 18

Vol. 5—A.C. Motors, windings, maintenance, converters, switches, fuses, etc. No. 19

Vol. 6—Relays, condensers, regulators, rectifiers, meters, switchboards, etc. No. 20

Vol. 7—Wiring, house light and power, circuits, high tension, plans, code, etc. No. 21

Vol. 8—Railways, signals, elevators, ignition, etc. No. 22

Vol. 9—Radio, telephone, telegraph, television, motion pictures. No. 23

Vol. 10—Refrigeration, illumination, welding, x-ray, electrical appliances, Index. No. 24

6,000 fully illustrated pages. Priced at only $22.50 for the ENTIRE SET. Also sold individually for $2.50 each.

WELDERS GUIDE—Covers Electric, Oxy-acetylene, Thermit, Gasomatic welding for sheet metal, spot and pipe welds, pressure vessels and aluminum, copper, brass, bronze and other metals. Airplane work, surface hardening, hard facing, cutting, brazing, etc. 608 Pages. Fully Illustrated. Only $3.

CIRCLE No. 10 IN COUPON

ADDITIONAL IMPORTANT TITLES

The following Audel Guides are all the best in their fields, written in clear simple fashion, all profusely illustrated. Circle the numbers wanted in the MAIL ORDER COUPON below. All books are sent for FREE EXAMINATION.

No. 5	TRUCK & TRACTOR GUIDE. 1376 Pages	$3.00
No. 7	PAINTING & DECORATING MANUAL. 417 Pages	3.00
No. 13	WIRING DIAGRAMS (Light & Power). 304 Pages	2.50
No. 29	SHEET METAL PATTERN LAYOUTS. 1152 Pages	7.50
No. 30	SHEET METAL HANDY BOOK. 448 pages	2.50
No. 31	MECHANICAL DRAWING GUIDE. 192 Pages	2.50
No. 32	MECHANICAL DRAWING & DESIGN. 410 Pages	3.00
No. 33	ELECTRONIC DEVICES. 384 Pages	3.00
No. 34	ELECTRICIANS EXAMINATIONS. 272 Pages	2.50
No. 35	ELECTRIC POWER CALCULATIONS. Page 480	3.00
No. 36	ELECTRIC DICTIONARY. 9000 Terms	3.00
No. 37	POWER PLANT ENGINEERS GUIDE. 1368 Pages	5.00
No. 38	ENGINEERS AND FIREMANS EXAMS. 544 Pages	2.50
No. 39	OPERATING ENGINEERS LIBRARY. 3 Book Set	12.00
No. 40	PUMPS, HYDRAULICS AND AIR COMPRESSORS. 1760 Pages	6.00
No. 41	HOUSE HEATING GUIDE. 966 Pages	5.00
No. 42	MILLWRIGHTS & MECHANICS GUIDE 1248 Pages	5.00
No. 43	DO-IT-YOURSELF ENCYCLOPEDIA. 2 Book Set	8.95
No. 45	MAGIC OF LAMINSCAPING. 128 Pages	1.00
No. 46	WATER SUPPLY & SEWAGE DISPOSAL. 436 Pages	4.00
No. 47	GUIDE TO CREATIVE PHOTOGRAPHY. 400 Pages	3.95

MAIL THIS NO-RISK COUPON TODAY!

THEO. AUDEL & CO. — Self Improvement Publishers Since 1879 — M1
49 W. 23rd Street, New York 10, N. Y.

1	2	3	4	5
6	7	8	9	10
11	12	13	14	15
16	17	18	19	20
21	22	23	24	25
26	27	28	29	30
31	32	33	34	35
36	37	38	39	40
41	42	43	44	45
46	47			

Please mail me for 7 days' FREE EXAMINATION the books I have circled at right. I agree to mail $2 in 7 days on each book or set ordered, and to further mail $2 a month on each book or set ordered until I have paid the purchase price, plus shipping costs. If I am not completely satisfied with my Audel Guides I may return them.

NAME_____

ADDRESS_____

OCCUPATION_____

EMPLOYED BY_____

☐ **SAVE SHIPPING COSTS!** Check here if you enclose complete payment with order. We pay postage charges. You have same return privilege.

Invention Clinic

Joseph H. Kraus

In this column each month Mr. Kraus will answer as many letters as space permits on those subjects he feels to be of widest general interest. Time does not allow him to reply to any letters except those printed here. Address your questions to the Invention Clinic, *Mechanix Illustrated*, 67 West 44 St., New York 36, N. Y.

Accelerator-Brake System

H. N. Luijt of Venice, Calif., sends copies of his patent drawings and an explanation of a combination accelerator-brake pedal. What is our opinion?

This system has both advantages and disadvantages. The duplex brake system would reduce chance of failure of the brakes. But it does so at nearly twice the expense, and it doubles the cost of repairs. The way in which the accelerator must be depressed would be tiring. There is the question of whether the purchaser would be willing to accept this inconvenience as the price he must pay for the added safety. But your problem is not with the customer. Your system needs to be sold to the manufacturer. It does not lend itself to a relatively simple attachment or change which could be made even by a skilled auto mechanic. It will not be easy to sell this idea.

Strip Can Opener

Kenneth J. Greeley of Cedar Glen, Calif., sends a copy of his patent issued in 1956. It is a tool for opening strip cans. The device could be made to operate electrically. He has been unable to interest a manufacturer. Why?

This is a simple tool which can be made to work properly but the market is limited. Except for coffee and nuts, few other items are packaged in strip cans. Maybe some coffee or nut packer could be encouraged to look into the potential of marketing your tool as a premium promotion device. Investigate this angle for a potential sale. And have your invention listed by the Small Business Administration.

INVENTOR'S TIP OF THE MONTH

The inventor who can design an automatic volume control attachment for a radio or TV set to cut down the decibels of commercials should be able to secure a large market. Such an AVC control should be simple to install and easy to repair, if it is to be a success.

Chair Leg Extension

A. Weber of St. Paul, Alberta, Canada, has developed a chair leg extension which may be adjusted over a considerable distance. Is it practicable and does it have marketing possibilities?

If this could be made to fit nearly every chair leg it might become successful, provided that the price is attractive. But there are many chair legs of many sizes and styles which this would not fit. This limits marketing potential. On the other hand, adjustable legs are found on both chairs and work or play tables for children. Finally, you could design a unit which would be much less expensive to produce. We recommend a study of furniture of various manufacturers, a reappraisal of your design, then a search. You may come up with something worthwhile. This is not yet quite good enough.

Plastic Fence

Louis Bencsics of Chicago, Ill., says that he and his brother are planning to build a solid plastic fence with color clear through. It will never need to be painted.

[*Continued on page 20*]

Here's The Offer No Other Radio-TV School DARES MAKE!

LEARN AT HOME in Spare Time!

YOU DO MANY PRACTICAL JOBS with the kits we send you. That's right, you PRACTICE what we TEACH! You build a Signal Generator, AC-DC Power Pack, and AC-DC Superheterodyne Radio Receiver and top quality 21 inch TV Set. EARN AS YOU LEARN with the famous RTS 30 Day Income Plan. Full instructions provided. NO HIGH SCHOOL DIPLOMA NECESSARY. This is a COMPLETE course which starts with basic subjects and gradually advances to Radio-TV. . . . ALL FOR A PRICE YOU CAN AFFORD!

***THE ONLY VERTICAL MULTI-CHASSIS 21" TV KIT OFFERED BY ANY RADIO-TV SCHOOL**

YOU BUILD THESE AND OTHER UNITS!

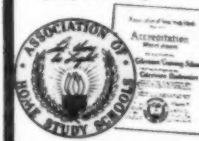
COMPLETE COLOR TV INSTRUCTION INCLUDED!

Each student is entitled to unlimited consultation service. All questions are answered promptly and completely by highly specialized instructors.

MULTITESTER KIT INCLUDED!

*Tubes Excluded

RTS' Membership in The Association of Home Study Schools is your assurance of Reliability, Integrity and Quality of Training.



RADIO-TELEVISION TRAINING SCHOOL
815 EAST ROSECRANS AVENUE
LOS ANGELES 59 CALIFORNIA
L 101D Est. 1922

Rush Coupon for FREE FACTS!

RTS Will Train You at a Price You Can Afford and When You Are a Qualified Graduate Will Help You Open a Service Shop of Your Own and Supply You With Every Bit of Equipment You Need to Get Started - Plus an Inventory of Parts and Necessary Supplies.

ALL FINANCED WITHOUT INTEREST OR CARRYING CHARGES!!

You Also Receive . . . Advertising Help and Material, Shop Plans, Business Systems, Letterheads, Calling Cards and Much More!

Here's What Two of Many Business Plan Shop Owners Have to Say!

This business takes in between $1500 and $2000 a month. I've had to hire help to keep up with it.
CULLEN W IRBY
Corpus Christi, Texas

The school lives up to its promises 100%. RTS does not lose interest in its students once they graduate.
HAROLD R. STANLAKE
Perry, Michigan

DON'T LOSE OUT — *FIND OUT!*

RADIO TELEVISION TRAINING SCHOOL, Dept. MI-11
815 EAST ROSECRANS AVE • LOS ANGELES 59 CALIF.
Rush me full information by return mail. (Please Print)

NAME _____ AGE _____
STREET _____
CITY _____ ZONE _____ STATE _____

NO SALESMAN WILL CALL ON YOU!

I'LL FINANCE YOU

... in your own
SCREEN PRINTING BUSINESS

Yes, I'm prepared to train you and establish you in your own spare time Business...even if you are now employed. I'll give you Credit, Financial Assistance. Mail Coupon Now!

PRINT WITHOUT A PRINTING PRESS!

Amazing but true! The Screen Print method requires no expensive Press and can be done in your own home. Start in Kitchen, Spare Room, Garage! Easy! Fascinating!

PRINT BEAUTIFUL SIGNS, POSTERS, BANNERS, FABRICS – anything in hundreds of colors. Use fabulous new "glowing" fluorescent colors. Can be seen for miles. No Art ability needed – we supply everything.

HELP SUPPLY DEMAND IN YOUR AREA! Just about every kind of business (drug, department stores, hardware, liquor stores, gas stations, theaters, jewelers, mortuaries, auto dealers, florists, beauty shops, real estate, etc.) can use Screen Printed things to increase business.

SOME $100 JOBS USE LESS THAN $10 WORTH OF MATERIALS ... you pocket the difference for your labor and know-how. $400.00 A WEEK EARNINGS POSSIBLE? Yes, some earn less, but Mr. J. T. Anderson reports he earns over $400.00 a week printing Greeting Cards certain times of year. Get your share Now. Mail Coupon Today!

FREE SAMPLES – MAIL COUPON NOW

Mr. C. J. Nowak, Screen Print Co., 15127 S. Broadway
Los Angeles 61, California, Dept. 31
Dear Mr. Nowak! I am genuinely interested. Please rush your "FINANCIAL ASSISTANCE PLAN" Revealing Screen Print HOME BUSINESS Details, Real SAMPLES, and "HOW TO" BOOKLET. I am under no obligation now or ever.

Name _____
Address _____
City _____ Zone ____ State _____

Would YOU Like to Make $1,000 A MONTH?

That's what Stanley Hyman made selling the amazing new PRESTO Fire Extinguisher!

STANLEY HYMAN

Amazing new kind of fire extinguisher. Tiny "Presto" does job of bulky extinguishers that cost 4 times as much, are 8 times as heavy. Ends fires fast as 2 seconds. Fits in palm of hand. Never corrodes. Guaranteed for 20 years! Sells for only $4.95! Over Three Million Sold!

Show it to civil defense workers, owners of homes, cars, boats, farms, etc. and to stores for resale—make good income. H. J. Kerr reported $20 a day. C. Kama, $1,000 a month. Write for FREE Sales Kit. No obligation.

MERLITE INDUSTRIES, Presto Div., Dept. P-10A
114 East 32nd Street, New York 16, New York
IN CANADA: Mopa Co., Ltd., 371 Dowd Street, Montreal 1, P.Q.

Invention Clinic

[*Continued from page* 18]

Be sure of two things: that the plastic will stand up under the extremes of the weather—not get too brittle in winter nor too soft in the summer; also be sure to figure the cost accurately. Plastics are expensive, especially when solid and of this size. You might look into a hollow or foam-filled construction. No patent is needed nor recommended unless you come up with a clever idea to cut cost and/or make construction easy.

Circular Level

John D. Bertch of Liberty, Ind., sends a diagram and description of a circular level. What is our opinion? Is a working model needed for a patent?

Visit a camera store and examine some of the older and even newer cameras. You will find your suggested level on them. This level also has been used on transits and in the form of an attachment. Except for so-called perpetual motion, and on the rare occasions when it is demanded, a working model is not needed for a patent.

Window Screen

C. Rentfro of San Gabriel, Calif., has designed a window screen which he feels has advantages over other screens. He claims it is easier to handle, offers better security and is simpler to clean. What is the possibility of securing a patent? What is our opinion?

Only a search will reveal if this is patentable. We are not quite as enthusiastic as you are with this arrangement. It entails the addition of a guide. Those who hang screens and storm windows by pushing the screen out of the window, then hooking it in place, would find your screen impossible to insert. Furthermore, you depend too much on the accuracy of a hinged joint. Why not make one of these and try to hang it outside while standing inside the room? You may come up with a better design.

Auto Lift

C. Mantell, Jr., of Canoga Park, Calif., sends diagrams and a description for an auto lift. Should he proceed with a patent if his attorney reports favorably following a search?

This depends on what you plan to do with your patent after you get it. The basic design is interesting. One question which needs a favorable answer is whether or not you are able to drive a car up a 30 per cent grade,

especially when it is in need of mechanical attention. But the greatest objection is that your lift needs a space of more than twice the length of the car's wheelbase. Nevertheless, the knock-down construction offers some compensation. Your decision should be made on whether or not you think you can produce this item profitably for a limited market.

Variable Speed Transmission

C. N. Douglas of Victoria, B. C., Canada, writes: Reference to your reply to S. L. Jenkins in your June issue: Why, if the transmission is basically good and fully variable with no more power loss than through the ordinary gear box, does it not replace the troublesome automatic shifts found on modern cars? Is there any book which describes all of the various transmissions?

We know of no book which describes all of the various transmissions. Thomas' Registry lists some 80 companies which manufacture variable speed transmissions. So there may be a market for a system if it is any good.

Air-Conditioner Stand

Royce Roddy of Freeport, Texas, says he has designed a portable air conditioner which permits the air conditioner to be moved anywhere in the home. Is it patentable and marketable?

Some air conditioners have their own stands to permit the unit to be moved about. So far as we can see, you have merely suggested an elevated truck for this purpose. I doubt that it is patentable.

Torque Converter

Nelson Hairgrove of Pasadena, Texas, says that he has invented a device which will give three times the torque of the present engine. He is afraid to send his plans to a patent attorney because friends say it will be stolen from him. He says he could not afford a costly court fight.

In the more than 40 years this writer has been giving advice to inventors, he hasn't heard of a single case of an invention being stolen by a patent attorney. Any registered attorney has more of a reputation and investment to lose than you. Furthermore, he has no idea of how valuable your invention might become, nor does he have any inkling of how well you have established priority. Finally, patent attorneys have processed many inventions which have made inventors rich. But this does not imply that we feel your torque convertor is good. •

HOW TO FIX ANY PART OF ANY CAR

QUICKLY--EASILY--RIGHT!

FREE 7-DAY TRIAL

WHETHER you're a beginner or an expert mechanic — now you can "breeze through" any "fix-it" job from simple carburetor adjustment to complete overhaul. Just look up job in index of MOTOR'S Brand-New Auto Repair Manual. Follow simple step-by-step directions, clear pictures. Presto—the job is done!

No guesswork! MOTOR'S MANUAL takes you from "scratch" — shows WHERE to start, WHAT tools to use. Covers EVERY job on EVERY car listed — *from 1953 thru 1960!*

Everything You Need to Know "Boiled Down" from 176 Official Shop Manuals

BIG NEW, REVISED, ENLARGED Edition contains the "meat" from 176 OFFICIAL shop manuals — simplified for YOU. 23,436 essential repair specifications on 25 different makes. Over 1,000 big pages. More than 2,800 "this-is-how" pictures, 225,000 service and repair facts. Leads beginners every step of the way. Time-saving factory repair procedures for experts. Instructions and pictures so clear you CAN'T go wrong. Used by U. S. Army and Navy.

Covers ALL Models — 1953 thru 1960

Buick	Hudson
Cadillac	Imperial
Chevrolet	Jeep
Chrysler	Lincoln
Continental	Mercury
Corvair	Nash
Corvette	Oldsmobile
Dart	Plymouth
De Soto	Pontiac
Dodge	Rambler
Edsel	Studebaker
Falcon	Thunderbird
Ford	Valiant

Try Book FREE 7 Days

Just mail coupon. (Attach it to postcard if you wish.) Make Manual prove what it's got. Unless you agree this is the greatest time and work saver you've ever seen—return book in 7 days, pay nothing. Mail coupon today to: MOTOR Book Dept., Desk 131, 250 West 55th street, New York 19, New York.

Same FREE Offer On MOTOR'S New Truck Repair Manual

Covers EVERY job on EVERY popular make gasoline and Diesel truck made since 1952. FREE 7-Day Trial. Check proper box in coupon.

MAIL COUPON NOW FOR 7-DAY FREE TRIAL
(Attach to Postcard if More Convenient)

MOTOR BOOK DEPT.
Desk 131, 250 W. 55th St., New York 19, N. Y.
Rush to me at once (check box opposite book you want):

☐ MOTOR'S *New* AUTO REPAIR MANUAL. If O.K., I will remit $3 in 7 days, $3 monthly for 2 months and a final payment of $1.95 (plus 45c delivery charges) one month after that. Otherwise I will return the book postpaid in 7 days. *(Foreign price, remit $10 cash with order.)*

☐ MOTOR'S *New* TRUCK REPAIR MANUAL. If O.K., I will remit $3 in 7 days, and $3 monthly for 3 months, plus 45c delivery charges with final payment. Otherwise I will return book postpaid in 7 days. *(Foreign price, remit $11 cash with order.)*

Print Name.....Age.....

Address.....

City.....Zone....State.....

☐ Check box and save 45c delivery charge by enclosing WITH coupon payment of $7.95 for Auto Manual (or $9 for Truck Manual) plus sales tax. Same return-refund privilege.

LEARN UPHOLSTERY
in your spare time
run your own
business
AT HOME

FREE BOOK
with sample lessons
WITH COURSE YOU MAKE

PLUS SLIP COVERS Yours to Keep or Sell

BE YOUR OWN BOSS

Earn more from the start in sparetime—right in your own home, enjoy a steady, growing income and independence for life in the booming field of Custom Furniture Upholstery.

Right off, you start upholstering with the tools, complete frames, fabrics and materials, included FREE with N. Y. State-approved UTS Home Study Course. You learn skilled professional custom upholstery, reupholstery, furniture finishing, repairs, how to make beautiful slip covers, cushions and draperies. EARN WHILE YOU LEARN, in your spare time AT HOME . . . the UTS easy way.

FREE ILLUSTRATED BOOK-FREE SAMPLE LESSON

Get ready for well-paid job and big profits, from steady work, as your own boss, running your own business. Mail coupon NOW for FREE BOOK! Training in N.Y. School also available.

VET APPV'D. ACCREDITED BY N.H.S.C.

UPHOLSTERY TRADES SCHOOL
Dept. PA-1510, 721 B'way, N. Y. 3, N. Y.

Please send me FREE book, "Your New Way to a Successful Career," and FREE sample lesson. No obligation—no salesman will call.
☐ Home Study ☐ Training in N. Y. School

Name _____
(Please Print Plainly)
Address _____
City _____ Zone ___ State _____
☐ Check if Korean Veteran

there's money to be made

IN THE ORNAMENTAL CONCRETE BUSINESS

Manufacture—and sell—Ornamental Concrete Products yourself. You can make high profit, low cost products that are easily, simply produced.

A simple do-it-yourself with ALUMINUM MOLDS

CMC light-weight, high quality Aluminum Molds bring you ease of operation and make copyrighted concrete designs with a national record of sales success. Here is a do-it-yourself project that brings not only fun but money—Big Money.

How to turn CONCRETE into GOLD

Clear. Concise. Complete. This big, fully illustrated book gives complete, simple, easily followed "from Start-To-Finish" instructions, lists over 200 CMC Specialty Molds. Gives Valuable Sales and Production Tips. Get the complete story. Order your copy today.

Send $2.00 for your copy—

CMC CONCRETE MACHINERY COMPANY, INC
DEPT. M HICKORY, NORTH CAROLINA

SCIENCE SHORTIES

TOBACCO EYE, a temporary vision blackout, is caused by excessive smoking.

An electronic teleprinter, capable of printing 3,000 words per minute, is used by the U.S. Air Force.

An aurora does not absorb radar signals but may badly distort them.

A skin thermometer has been developed which gives readings in ten to 15 seconds.

Pigs raised in an insulated, weatherproof house in which temperatures are kept in the 60° to 70°F. range are healthier, gain weight faster and produce more meat per pound.

Miniature pressure gauges used in the atomic energy field are so sensitive they can record accurately differences in pressure between the floor and ceiling of a room.

Radio-detonated pellets have been designed to distribute medicine at specific points in the digestive system.

The Empire State building in New York City is hit by lightning as often as 48 times a year.

Steel companies and can makers are testing new types of light gauge steel tin plate that may cut the weight of tin cans almost in half.

If electricity is cut off, a fully loaded freezer box will usually keep foods frozen for a couple of days; in a half loaded box, however, food may not remain frozen for more than a day.

Colored surfaces appear to lose their color when they are hit by a light that flickers at a certain rate.

More men have become millionaires in the U.S. since 1945 than in any other 15-year period.

Almost one out of every three cups of coffee made in the U.S. is now made with instant coffee.

A new refractory metal thermocouple combination measures temperatures accurately up to 5,072°F.

Coating the edges of a drawer and runway with paraffin, wax or powdered graphite may prevent sticking.

Steel surface coverings for high-speed military aircraft are being made six thousandths of an inch thick, about twice the diameter of a human hair.

Each American in 1959 ate an average of 160.1 pounds of meat and 428 pounds of dairy products.

The hummingbird has a long, tubular tongue through which it sucks up nectar. •

SPACEMOUSE

A MOUSE named Anphex (Animal Photosynthetic Experiment) may pave the way for solving the food, water and oxygen problems in space flight. Anphex recently survived a 66-day confinement in which his sole food and oxygen supply came from algae stored in his large glass dwelling.

The importance of the experiment is indicated by the fact that a 516-day one-man trip to Mars would require a minimum of two tons of food and water and 180,000 quarts of oxygen, according to biochemist Dr. Russell O. Bowman, a research scientist at Chance Vought in Dallas. Dr. Bowman is shown with the mouse, Anphex, in the photo below.

Anphex was placed in a closed ecological system which provided the necessary oxygen and food. Water was sealed in with the rodent. Certain salts and nitrogen-yielding urea were added to the algae medium. The algae, in turn, lived and thrived on carbon dioxide exhaled by the Spacemouse. Deadly carbon monoxide was not produced by the *chlorella pyenoidisa* stain of green algae.

Algae, which is almost flavorless, can be treated so as to taste like steak, fish, coffee, desserts and other varieties of foods. It has a caloric value of about five calories per gram of dried material, compared to four for sugar and nine for butter.

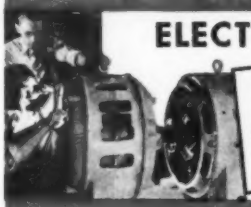
"The ultimate goal is to devise a closed system which will provide oxygen, food and water for man and allow reprocessing of human waste," says Dr. Bowman.

Algae and the Spacemouse may provide the answer to feeding men in space.

—*William M. Hall*

These men are getting practical training in ...

ELECTRICITY



ELECTRONICS

ON REAL
Motors • Generators
Switchboards • Controls
Modern Appliances
Automatic Electronic Control Units

TELEVISION

Radio Electronics

ON REAL
TV Receivers
Black & White and Color
AM-FM and Auto Radios
Transistors • Printed Circuits • Test Equipment

Train in *NEW* Shop-Labs of

COYNE

In Chicago—Electrical and Electronic Center of the World. Prepare for a better job and a successful future in a TOP OPPORTUNITY FIELD. Train on real full size equipment at COYNE where thousands of successful men have trained for 60 years—largest, oldest, best equipped school of its kind. Professional and experienced instructors show you how, then do practical jobs yourself on more than a quarter of a million dollars worth of equipment. No previous experience or advanced education needed. Employment Service to Graduates.

Start Now — Pay Later — Liberal Finance and Payment Plans. Pay most of tuition after graduation. Part-time employment help for students. Choose from nine yearly Starting Dates.

Mail Coupon or Write to Address Below for Free Book —"Guide to Careers." Whether you prefer ELECTRICITY, TELEVISION-RADIO or COMBINED ELECTRONICS TRAINING, which includes both fields, this book describes all training offered.

Information comes by mail. No obligation and NO SALESMAN WILL CALL.

B. W. Cooke, Jr., Pres. Founded 1899

COYNE ELECTRICAL SCHOOL

Chartered as an Educational Institution Not for Profit

1501 W. Congress Pkwy., Chicago 7, Ill., Dept. 11-1C

MAIL COUPON OR WRITE TO ADDRESS BELOW

COYNE ELECTRICAL SCHOOL
New Coyne Building, Dept. 11-1C
1501 W. Congress Pkwy., Chicago 7, Ill.

Send BIG FREE book and details of all the training you offer. However, I am especially interested in:

☐ Electricity ☐ Television ☐ Both Fields

Name_____

Address_____

City_____ State_____

Unlike most other schools, we do not employ salesmen.

CUT-TO-FIT HOMES CUT BUILDING COSTS

CHOICE OF 57 DESIGNS

ORDER NOW

SAVE UP TO 1/3

Build your own home and save the builders' profit — plus savings in lumber and labor with Sterling Ready-Cut-Homes. Anyone can assemble with simple, easy to follow plans furnished. Every house complete with all lumber, roofing, nails, glass, hardware, paint, doors and windows marked ready to erect. Freight paid. Complete building plans ready for filing at low cost. Sold separately if desired. Write today!

PRICED FROM $2295 UP
Five Easy Payment Plans
Send 25c for NEW COLOR CATALOG

INTERNATIONAL MILL AND TIMBER CO.
DEPT. M11, BAY CITY, MICHIGAN

Men! Send for This Handsome SAMPLE CASE-FREE

I'll Show You How to Make Up to $40.00 in a Day

Mail coupon for FREE Tailoring Sample Case packed with scores of beautiful, big-value suit and overcoat fabrics. Take orders from friends, fellow-workers, others, for fine quality, made-to-measure clothes. Pocket big cash profits in advance. Because wearing our suits and overcoats brings more orders, we make it easy for you to get your own clothes without it cost. No experience needed. Satisfaction Guaranteed. SEND NO MONEY. Just fill out and mail coupon now!

J. C. FIELD & SON, Harrison & Throop Streets
DEPT. R-1684 - CHICAGO 7, ILLINOIS

J. C. FIELD & SON, Dept. R-1684
Harrison & Throop Sts., Chicago 7, Ill.

Dear Sir: I WANT A MADE-TO-MEASURE SUIT TO WEAR AND SHOW, without paying 1c for it. Rush details and Sample Kit of actual fabrics, ABSOLUTELY FREE.

NAME..... AGE.....

ADDRESS.....

CITY..... STATE.....

ADDING MACHINE $1.98 or 2 for $3.69

+ — × ÷

ADD—SUBTR.—MULT.—DIVIDE

Does all 4 operations. Handles 9 columns of numbers. Settle for no less. Leatherette case. Lowest price adder made in America. Beware of cheapened foreign imitations. Money back guarantee. Agents wanted. $1.98 add 4% tax in Pa.

TOM THUMB P. O. Box 5066, Dept. J-31 Philadelphia 11, Pa.

AConomize on Gasoline

Get more miles per dollar—install an AC ACon-O-Mizer between your fuel pump and carburetor. Reduces flooding and stalling ... boilers fuel pressure—precisely and instantly—to every driving condition from idle to full throttle. The best answer yet to real gasoline economy!

suggested retail price

$7.95

At Your Nearby Service Station, garage or General Motors Dealer

AC

ACon-O-Mizer

AC SPARK PLUG THE ELECTRONICS DIVISION OF GENERAL MOTORS

BURIED TREASURE & RELICS

Powerful electronic M-SCOPE locates hidden loot, gold, silver, coins, etc. Used world-wide by experienced explorers since 1932. Transistorized, lightweight. From $59.50. Terms. Guaranteed. Write for FREE illustrated booklet of fascinating customer reports.

FISHER RESEARCH LAB., INC.
Dept. 6E, Palo Alto, Calif.

LEARN WHILE YOU SLEEP!

Improve mind, body and personality with amazing new university-tested method. $2.00 rushes 100 page fact-filled illustrated book of complete instructions. Satisfaction guaranteed. Free folder on request. Sleep-Learning Research Ass'n. Box 24-r, Olympia, Wash.

STATEMENT REQUIRED BY THE ACT OF AUGUST 24, 1912, AS AMENDED BY THE ACTS OF MARCH 3, 1933, JULY 2, 1946 AND JUNE 11, 1960 (74 STAT. 208) SHOWING THE OWNERSHIP, MANAGEMENT, AND CIRCULATION OF MECHANIX ILLUSTRATED published monthly at Greenwich, Conn., for October 1, 1960.

1. The names and addresses of the publisher, editor, managing editor, and business managers are: Publisher, Fawcett Publications, Inc., Greenwich, Conn.; Editor, William Parker, New York City, N. Y.; Managing Editor, Ralph Daigh, Pelham Manor, N. Y.; Business Manager, Gordon Fawcett, Greenwich, Conn.

2. The owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual member, must be given.) Fawcett Publications, Inc., Greenwich, Conn.; W. H. Fawcett, Jr., Norwalk, Conn.; Marion Bagg, Overland Park, Kansas; Roger Fawcett, New York, N. Y.; V. D. Fawcett, Greenwich, Conn.; M. B. Fawcett, Norwalk, Conn.; Gordon W. Fawcett, Greenwich, Conn.; Gloria Leary, Santa Monica, Cal.; V. F. Kerr, Bakersfield, Cal.; Allan M. Adams and Jack B. Adams as trustees under the trust agreement with Eva P. Roberts, dated July 3, 1959, Greenwich, Conn.; H. A. Fawcett, New York, N. Y.; Roscoe Kent Fawcett, Reno, Nevada; M. F. Fawcett, Greenwich, Conn.

3. The known bondholders, mortgagees, and other security holders owning or holding 1 percent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. Paragraphs 2 and 3 include, in cases where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting; also the statements in the two paragraphs show the affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner.

5. The average number of copies of each issue of this publication sold or distributed, through the mails or otherwise, to paid subscribers during the 12 months preceding the date shown above was: (This information is required by the act of June 11, 1960 to be included in all statements regardless of frequency of issue.) 1,078,450.

GORDON FAWCETT,
Business Manager

Sworn to and subscribed before me this 30th day of September, 1960.
[SEAL] LILLIAN M. KLEIN
(My commission expires April 1, 1963)

MAKE MORE MONEY

Be A MASTER TECHNICIAN In One Of AMERICA'S BIG 3 INDUSTRIES

train at home in spare time

FREE BOOK

ELECTRONICS
TELEVISION-RADIO

Includes... RADIO SET TV SET MULTITESTER

Business of Your Own or High-Pay Career in...
- Service & Repair
- Broadcasting & Communications
- Hi-Fi & Stereo Sound Systems
- Electronics for Guided Missiles
- TV-Radio Manufacturing
- Industrial Electronics
- Automation & Computers
- Radar & Micro Waves
- TV-Radio Sales
- FCC License Preparation

DON'T BE HALF-TRAINED

A Successful Career... Security... Are Yours NOW in Modern Industry!

RIGHT NOW IS THE BEST TIME for you to get into the field of your choice! You can be a part of its growth, you can increase your earning power, you can really build a Successful, Secure Future. Send coupon for complete facts by mail...NO SALESMAN WILL CALL!!!

N.T.S. TRAINS YOU RIGHT, FAST and EASY! Incomplete "short-cut" training limits your earning power, disqualifies you for top-pay jobs. N.T.S. Shop-Tested Home Training is...

- ★ BETTER—classroom developed, lab and shop-tested, industry-approved, home study designed.
- ★ MORE COMPLETE—you learn All Phases and you receive Everything You Need for Success...
- ★ LOWER COST—One Master Course at One Low Tuition gives you more training at lower cost.

TRAINING PAYS FOR ITSELF AND MORE...Earn your tuition—and more—while in training. We'll show you how. Many students have...so can you!

AUTO MECHANICS
& DIESEL

FREE BOOK

Includes... TOOLS SOCKET SET ANALYZERS

Business of Your Own or High-Pay Career in...
- Service & Maintenance
- Motor Tune-Up
- Automatic Transmissions
- Diesel & Fuel Injection
- Overhauling & Rebuilding
- Automobile Air Conditioning
- Electrical Systems
- Automatic Power Devices
- Industrial & Marine Engines
- Foreign Car Sales & Service

AIR CONDITIONING
REFRIGERATION
ELECTRICAL APPLIANCES

FREE BOOK

SEE OTHER SIDE

Includes... TOOLS • GAUGES TESTER

Business of Your Own or High-Pay Career in...
- Air Conditioning—Refrigeration
- • Domestic & Commercial
- • Industrial & Mobile
- Installation & Contracting
- Automobile Air Conditioning
- Electrical Appliances
- • Small & Major
- • Heating, Motor & Combination
- Sales, Service & Repair
- Manufacturing & Distribution

RESIDENT TRAINING AT LOS ANGELES
If you wish to take your training in our Resident School in Los Angeles, start NOW in our big, modern Shops and Labs. Here you work with latest equipment, finest and most complete facilities offered by any school. Expert, friendly instructors. Personal attention. Help in finding home near school . . . and part time job while you learn. Check box in coupon for full information.

ACCREDITED MEMBER

NATIONAL TECHNICAL SCHOOLS
World Wide Training Since 1905
4000 South Figueroa Street
Los Angeles 37, Calif., U.S.A.

GET THE BENEFIT OF OUR OVER 50 YEARS EXPERIENCE

SEND FOR FREE BOOK (FULLY ILLUSTRATED) AND ACTUAL LESSON IN AREA OF YOUR CHOICE

RUSH AIR MAIL NO POSTAGE NECESSARY

RUSH AIR MAIL . . . NO POSTAGE NECESSARY

CUT OUT AND MAIL THIS CARD TODAY

For FREE Fully-Illustrated Opportunity Book and Actual Lesson In the Field of Your Choice.

CHECK ONE ONLY:

- ☐ ELECTRONICS-TV-RADIO
- ☐ AUTO-MECHANICS & DIESEL
- ☐ AIR CONDITIONING-REFRIGERATION-ELECTRICAL APPLIANCES

CHECK ONE ONLY:

Name _____ Age _____

Address _____

City _____ Zone _____ State _____

☐ Check here if interested ONLY in Resident Training at Los Angeles. Dept. A-11

Veterans: Give date of discharge _____

NO SALESMAN WILL CALL . . . THERE IS NO OBLIGATION

DON'T BE HALF-TRAINED...

your N.T.S. Master Course gives you everything you need for success in ANY ONE of these "BIG THREE" Fields.

ELECTRONICS
TELEVISION-RADIO

YOU ARE NEEDED in All Phases of Electronics-TV-Radio . . . Servicing, Communications, Broadcasting, Manufacturing, Automation, Radar and Micro-Wave, Missile and Rocket Projects, plus all the other high-pay branches of this vigorous industry. N.T.S. Shop-Tested Home Training gives you ONE MASTER COURSE . . . at ONE LOW TUITION . . . to train you for these unlimited opportunities, including many technical jobs leading to supervisory positions.

YOU BUILD MANY EXPERIMENTAL AND TEST UNITS with parts we send you. You advance step-by-step, perform more than 100 experiments, and build a TV set and a Superhet Receiver. You also receive a valuable Multitester for your repair, service and trouble-shooting job projects.

A FULLY ILLUSTRATED Book and an Actual Lesson are yours for the asking. Check card below and mail NOW . . . TODAY!

AUTO MECHANICS
and DIESEL

TAKE YOUR CHOICE. Be a successful all-around car, truck and heavy-engine Mechanic . . . Or specialize in your favorite field: Tune-Up, Automatic Transmissions, Farm Mechanics, Trucks and Buses, Stationary Installations, Foreign Cars . . . Or get into Auto Air Conditioning, Engine Rebuilding, Diesel and all the other high pay fields . . . Or go into business for yourself. Remember . . . a qualified ALL AROUND MECHANIC always has a good job!

YOU GET AND KEEP VALUABLE PROFESSIONAL EQUIPMENT. We give you the tools of your trade: a Complete Set of Mechanic's Tools in an ALL-Metal Tool Box . . . a Motor Analyzing Set . . . plus a Top Quality Socket Wrench Set with Fittings.

PROVE IT TO YOURSELF. Our streamlined lessons, manuals, and other training materials are easy to understand, completely practical and right up-to-date. N.T.S. gives you everything. Mail card TODAY and find out for yourself!

AIR CONDITIONING
REFRIGERATION and ELECTRICAL APPLIANCES

SEE OTHER SIDE

FUTURE BRIGHT FOR TRAINED TECHNICIANS. Over 30,000 new Technicians must be trained annually to help service and repair the 50 million air conditioners, refrigerators and appliances that will need fixing this year alone. You can go places in your own business or with a manufacturer, dealer, distributor or department store. With N.T.S. All-Phase training, your earning power is unlimited!

JOB TRAINING AT HOME. You get Professional Technician's Tools, Precision Instruments, plus a Factory-Made Appliance Tester . . . for your experiments and job projects, for your Spare Time Work while in training, and for your service and repair work later on.

DON'T LOSE OUT—FIND OUT. We'll rush you our big, fully illustrated Book and Actual Lesson. No obligation and it costs you nothing to find out. Mail card TODAY . . . DO IT NOW!

FIRST CLASS
Permit No. 3087
Los Angeles, Calif.

BUSINESS REPLY MAIL
NO POSTAGE STAMP NECESSARY IF MAILED IN THE UNITED STATES

VIA AIR MAIL

— POSTAGE WILL BE PAID BY —

NATIONAL TECHNICAL SCHOOLS
WORLD-WIDE TRAINING SINCE 1905
4000 So. Figueroa Street
Los Angeles 37, California

ACCREDITED MEMBER
NATIONAL HOME STUDY COUNCIL

Train With Confidence . . . N.T.S. is an Accredited Member of the National Home Study Council . . . The only nationally recognized accrediting agency for private home study schools.

NATIONAL TECHNICAL SCHOOLS
WORLD-WIDE TRAINING SINCE 1905

Address correspondence to Dept. A
4000 So. Figueroa Street
Los Angeles 37, California

MY SPARE TIME HOBBY MAKES ME $5.00 an hour CASH PROFIT

—*Grover Squires*

START YOUR OWN SPARE TIME BUSINESS
You can turn your spare time into Big Cash Profits with your own COMPLETE SHARPENING SHOP... Grind saws, knives, scissors, skates, lawn mower blades... all cutting edges. Your Own Cash Business with no inventory right at home... no experience needed.
FREE BOOK tells how you can start your own spare time business while you are still working at your regular job. Low Cost—time payments only $15.00 a month. **Send postcard today.**

DELSAW SHARP-ALL CO, 7181 Field Bldg., Kansas City 11, Mo.

PROFESSIONAL'S WAY to remove furniture finishes

Complete removal of old finish gives you more beautiful new finish. Here's how professionals do it: Apply Heavy-Bodied Klean-Strip Paint Remover. When old finish blisters, wash it off with steel wool dipped in warm water and detergent solution. Easy, fast, thorough! Write for free descriptive folder.

The Klean-Strip Co., Inc.,
2340 S. Lauderdale, Memphis 6, Tenn.

Heavy-Bodied KLEAN-STRIP

MAKE BIG MONEY
Selling 100% Waterproof Vulcanized Leather Boot

FREE OUTFIT STARTS YOU! Make $10 to $75—as much as $250 extra per month with Mason's 100% water-tight leakproof LEATHER boot. VULCANIZED seams. Water shedding, "breathing" leather. Guarantees dry feet. Means a mountain of cash profits. One of 230 Mason dress, work, sport styles for men—women. 250,000 pair factory stock. Sizes—3½ to 15... AAAA to EEEE. Send for Free Selling Outfit.

MASON SHOE MFG. CO.
Dept. G-575, Chippewa Falls, Wis.

$1 BRINGS YOU $18

Discover Flok-Kraft and Earn $$$$$ AT HOME

Earn up to $15.00 per hour spare time. Amazing new Velvet-fiber spray instantly makes any object (Lamps, Radio & TV Cabinets, Figurines, Signs, Auto dash boards, toys, furniture, draperies—anything) worth expensive $$$$$ Prices . . . like magic, you can spray anything with this beautiful new suede-like finish that feels like rich Velvet.

EARN UP TO $300.00 PER WEEK SPARE TIME

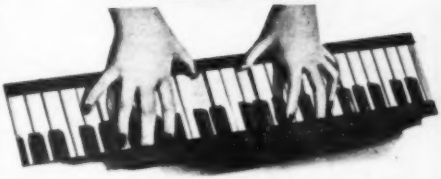
Imagine, materials cost only 3c per square foot. (Average TV or radio cabinet can be beautifully sprayed with this startling new 3-dimensional Velvet finish in 15 minutes at a cost of only 34c in materials. Your charge for this job is at least $10.00.)

REPRESENTATIVES IN YOUR AREA URGENTLY NEEDED

Own your own business. Work at home in your spare time. Help fill the huge growing demand for this amazing new beautiful Velvet-fiber finish. Orders come from stores, offices, homes, architects, auto dealers.—everywhere. Possible $20,000,000.00 worth of jobs to be done. Investigate today—be first in your area!

Actual samples in 16 Radiant Colors, Booklet of 50 Home Business Opportunities and Confidential Details all sent free! Send no money. Write: **Coast Industries, Los Angeles 63, Calif., Dept. M-1.**

YOU CAN PLAY



ANY INSTRUMENT

. . . even if you don't know a single note of music now!

IMAGINE! Even if you never dreamed you could play . . . you can soon surprise your friends with your musical ability.

No special talent or previous training needed. Clear, simple directions tell you exactly what to do, so you can't go wrong! Spend a few minutes a day—and only a few cents per lesson. Teach yourself piano, guitar, accordion, organ, any instrument. Play popular music, hymns, classical, any other music—by note, quickly. Over ONE MILLION students all over the world have taken up music this famous way.

Stop Cheating Yourself of These Joys!

Popularity! New friends. Gay parties. Good times. Career. Extra Money . . . understand, appreciate, converse about music. Learn lives and compositions of modern and great masters . . . Relax! Banish worries and frustrations. Satisfy self-expression, creative urge. Gain self-confidence.

MAIL COUPON FOR FREE BOOK

See for yourself why our course has been successful since 1898. Read the whole fascinating story of this wonderful course in 36-page illustrated book. For FREE copy, mail coupon.

U. S. School of Music, Studio A221, Port Washington, N. Y.

Licensed by N. Y. State Education Dept.

U. S. SCHOOL OF MUSIC
Studio A221, Port Washington, N. Y.

Please send me your 36-page illustrated Free Book. I'm interested in playing (name instrument). .....
☐ I do ☐ I do NOT—have instrument now.

Name ..... Age .....
(please print)

Address .....

City ..... Zone..... State.....

WAR SURPLUS HALF OTHER BARGAINS SAVE UP TO 90%

BATTERY OPERATED CAPSTAN—Terrific power for pennies. Use for rope rigging of any type as anchor windlass on boats. Can be bumper mounted for pulling power, lifting or dragging on jeeps, tractors, trailers, trucks and campers. Will operate on 6, 8, 12, 24 or 32 V. Fully enclosed weather-proof case. 5½" dia. spool. Capacity 2500 lbs. plus.Shpg. wt. 68 lbs. 18" L. (incl. spool) x 8" hi x 13" wide. 3 HP motor with tremendous reduction. NEW. Another Airborne exclusive—$89.95.

"DELUXE 11" ARC WELDING KIT
Consists of 160-250 AMP. Gen., voltage reg., ammeter, shunt, adjustable helmet, electrode holder, pr. welder's gloves, 30' welding cable, reactor coil, toggle switch, rheostat. Approx. GOVT. COST $850. All units guaranteed pre-tested. $34.95 complete.

BENDIX GEROTOR PUMP & MOTOR—NEW!
Used widely for sheep, cattle and weed oil spraying. Transfer pump for most fuels. Use wherever fluid pumping required. Excellent for hydraulic installations and as crankcase drain pump for marine engines. Has ¾" pipe connections, built-in relief valve adjustable up to 1500 lbs. Max. cap. 6 GPM. 1½ H.P. 24 V. motor. Use on 12 to 32 V. Approx. GOVT. COST $330. $10.95.

HEAVY-DUTY CABLE Size No. 0. Four layers insulation. Fiberglas jacket. Use as positive & negative electrode cables for arc welder. High amperage, late govt. spec. Approx. GOVT. COST $40. 50' lengths only—$14.50.

NEW 1961 CATALOG! Tremendous catalog—our biggest ever—fully illustrated—1000s of bargains in war surplus & other items. Send 25c in coin for your copy today or free copy with order. Where prod. indicated applies to US only. Other prices FOB Culver City, Cal. Send cash, check, money order. 50% dep. COD.

AIRBORNE SALES CO., INC. DEPT. MI 161
8501 Stellar Drive Culver City, Calif.

ELECTRIFY PLAYER PIANOS PUMP ORGANS

YOU CAN QUICKLY END TIRESOME FOOT-PUMPING
With a Compact Low-Cost Lee Silent Suction Unit

EASY TO INSTALL
FULLY GUARANTEED
1000'S IN USE
write to
LEE MUSIC MFG. CO.
Box 595, Tujunga, Calif.

PROFIT IN YOUR SPARE TIME

FIX SMALL GASOLINE ENGINES
Outboard • Powermower • Chain Saw • Tractor
MAKE EXTRA MONEY—or, repair your engines and SAVE. Illustrated, easy-to-understand, Home Study Course. FREE information. Write TODAY!
LINCOLN TECHNICAL INSTITUTE
Suite 1-G, 472 Market Street, Newark 5, New Jersey

Want BIG PAY—
Your Own Business?

Be a LOCKSMITH

You can quickly step into a well-paid job or start a big-profit business of your own. Shortage of locksmiths means opportunities everywhere, spare-time or full-time.

EARN EXTRA MONEY FROM THE START!
All Special Tools, Supplies Furnished Free
Age, education, minor physical handicaps don't matter in this growing, steady-income trade. You learn fast at home—gain practical experience through well-illustrated lessons. You do real jobs under the personal guidance of experts.

ILLUSTRATED BOOK—FREE
For a future as your own boss, or in a big pay job, send for FREE illustrated book. No salesman will call. Only school of its kind. Lic. State of N. J.; Accredited Nat'l. Home Study Council. Vet. Approved. (Div. Technical Home Study Schools).
Locksmithing Institute, Dept. 301-1
150 Park Ave., E. Rutherford, N. J.
MAIL COUPON TODAY

Locksmith Inst., Dept. 301-1, 150 Park Ave., E. Rutherford, N. J.
Please send FREE Illustrated Book without obligation.
Name ----------
Address ----------
City ---------- Zone ---- State ----------

NOW SEE THIS!

INFRARED EYE scans traffic at a busy Denver, Colo., intersection. The Traffitrol Detector, developed by Minneapolis-Honeywell, offers great flexibility to traffic engineers and police officials in studying and controlling traffic. The TD can be connected with all types of control boxes and central computers and can detect and count cars traveling up to 80 mph. It's mounted on utility poles, buildings, etc.

PANELESCENT Nite-Lite Switch Plate will operate for more than five years at a cost of less than five cents a year, according to Sylvania Electric Products, Inc. The new glow-in-the-dark switch plate can be used wherever there are single toggle switches. A screwdriver is the only tool required to install the unit. Nite-Lite Switch Plate will retail for $2.49.

NEW RUBBER STAMP BUSINESS PAYS BEGINNERS UP TO $9.20 AN HR.

START AT HOME IN SPARE TIME with Table Top Machine!

The multi-milliondollar Rubber Stamp business—once controlled by a few big companies—is now being taken over by small operators—one in each community throughout the United States. Men and Women who have this inexpensive machine can turn out huge quantities of Rubber Stamps with special wording that buyers once were forced to buy from big cities. Material costing only 27c makes a stamp that sells for $1.80. The machine that does the work is simple and easy to operate and it turns out as many as six Rubber Stamps at a time, each with different wording such as names, addresses, notices, stock numbers, prices and other "copy" needed by offices, factories and individuals. Working full capacity, it can earn as much as **$9.20 an hour for the operator!** Now you can get into the big-pay business yourself, with your own home as headquarters. You don't need experience. We supply everything, including complete instructions and eight ways to get business coming in fast. Start making up to $9.20 an hour from the very beginning. Cash in on the profitable Rubber Stamp business in your community, right away. We'll mail full particulars FREE and no salesman will call. Be first in your locality. Rush coupon today or send your name on postcard to

RUBBER STAMP DIV., Dept. R-4-A
1512 JARVIS AVENUE • CHICAGO 26, ILLINOIS

RUBBER STAMP DIV.
1512 Jarvis Ave., Dept. R-4-A
Chicago 26, Illinois

FREE!

Please rush full particulars about the little machine that can get me started in the profitable Rubber Stamp business at home in spare time. Everything you send me is FREE and no salesman will call.

NAME _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

REAL ESTATE

BE A BROKER

FREE BOOK TELLS HOW

PAYS BIG! SEND FOR FREE, BIG, ILLUSTRATED CATALOG NOW! Graduates report making substantial incomes. Start and run your own business quickly. Men, women of all ages, learn easily. Course covers Sales, Property Management, Appraising, Loans, Mortgages, and related subjects. STUDY AT HOME or in classrooms in leading cities. Diploma awarded. Write TODAY for free book! No obligation.
Approved for World War II and Korean Veterans

WEAVER SCHOOL OF REAL ESTATE (Est. 1936)
2020M Grand Avenue Kansas City, Mo.

WOODWORKING

LOW COST HOME TRAINING COURSE FOR BEGINNERS & ADVANCED CRAFTSMEN

Make money. Learn skills and secrets of fine woodworking and tool use. Professionally prepared shop method training tells and shows how. Covers everything. Easy to master.

Write for Free Booklet

INTERSTATE TRAINING SERVICE
DEPT. F-4, PORTLAND 12, OREGON

LEARN MEAT CUTTING AT NATIONAL

Pay After Graduation

The steady dependable trade of Meat Cutting taught easily in 8 short weeks. YOU LEARN BY DOING under actual meat market conditions in big modern school at Toledo.

For beginners or men with experience. Get a profitable store of your own. Remember, PEOPLE MUST EAT! Big pay jobs. Free employment help. Thousands of successful graduates.

Buying, cutting, percentage, pricing, advertising, selling, etc. A complete retail meat education. National School established 38 years. Get National training NOW. Pay your tuition in easy weekly payments after you graduate. Send coupon for FREE school catalog—TODAY. G.I. approved.

National School of Meat Cutting, Inc., Dept. 52-N, Toledo 4, Ohio

Send me your FREE school catalog on National Training at Toledo in Meat Cutting, Meat Merchandising and Self Service Meats. No obligation. No salesman will call.

Name ..... Age .....

Address .....

City ..... State .....

Approved for Veterans

LEARN AT HOME IN SPARE TIME

Draftsmen earn more, have pleasant working conditions. The Draftsman prepares the World of Tomorrow. Our method teaches you the hows of Mechanical, Machine, Architectural, Aeronautical, Highway drafting. Work in the field of your choice.

MACHINES CANNOT REPLACE DRAFTSMEN

You will be sent everything you need—professional drafting instruments, drafting equipment, portable drafting table, illustrated lesson manuals, etc. Send name for FREE BOOK and Special Pay as You Learn form. **CHRISTY TRADES SCHOOL, Dept. DB-1406, 3214 W. Lawrence, Chicago 25.**

Secrets of VENTRILOQUISM Now Revealed!

Easy to learn in 60 to 90 days with our Home Study Course. **RESULTS GUARANTEED.** Make Money! Be Popular! Have Fun! Big Opportunity! Radio, Television, Stage Appearances! For Free Information regarding price and terms, WRITE. You must state your age. Dummy Catalog 25c.

MAHER HOME COURSE OF VENTRILOQUISM
Box 36, Studio M1-1, Kensington Station
Detroit 24, Michigan

LEARN FIBERGLASSING
at Home in Spare Time

Interstate's complete home training course in Plastics Fabrication teaches fiberglassing, plastic molding, casting, laminating, internal carving, etc. Shows how to make hundreds of salable articles of plastic. Professionally prepared. Special materials furnished. Send postcard for FREE booklet.

INTERSTATE TRAINING SERVICE
Dept. C-4, Portland 12, Oregon

SIGN PAINTING
Home-Study Course — Only $5.95

Teaches you commercial sign painting and sign building as it is being done TODAY in leading shops all over the country. Complete practical course for self-instruction. Shows latest methods of truck lettering, office doors, wood letters, reflecting signs, plastics, sprayed signs, gold leaf, silk screen process, up-to-date alphabets, money-making business information, etc.

SATISFACTION GUARANTEED OR REFUND!

Contains all the instruction of a high-priced correspondence course. Full price, only $5.95, postpaid. Or C.O.D. plus postage. No risk—order today. Satisfaction or money back! Order "Sign Painting Course." **NELSON-HALL CO., 210 S. Clinton St., Dept. 2AN-3, Chicago 6, Ill.**

Now Many Wear
FALSE TEETH
With More Comfort

FASTEETH, a pleasant **alkaline** (non-acid) powder, holds false teeth more firmly. To eat and talk in more comfort, just sprinkle a little FASTEETH on your plates. No gummy, gooey, pasty taste or feeling. Checks "plate odor" (denture breath). Get FASTEETH at drug counters everywhere.

get into operating or repairing EARTH MOVING EQUIPMENT

Men needed now for good paying jobs in booming road and construction work. Learn operating or repair-building of heavy road machinery, cranes, bulldozers, earth carriers, etc. Actual "on the job" training. 5 to 13½ week courses. Classes start every Monday. Reserve your space now. Complete catalog and reservation facts FREE. Approved for veterans. Write

Greer TECHNICAL INSTITUTE
Attn. M. A. Hutch, Box 368, Braidwood, Ill.

PATENTS GRANTED

A WRAP-AROUND windshield with a transparent film or coating to conduct electricity for heating and removing ice, frost or fog won patent 2,954,454 for Romey A. Gaiser of Muncie, Ind.

Smokers may soon be able to take full-filtered, partly filtered or non-filtered drags from the same cigarette. The custom filter invented by Jacob A. Saffir of Los Angeles, Calif. took patent 2,954,035.

If you're afraid of being kicked by a cow, forget it. Millford S. Bullard of Crowley, Texas, was given patent 2,954,008 for an anti-kick device. It is yoke-shaped and straddles Bossie's back just forward of her rump and legs. It clamps along the hollow above the hips and against the flesh and muscles of her flanks.

You can sharpen a knife simply by withdrawing it from the special sheath devised by Leo A. Paldanius of Port Huron, Mich. The

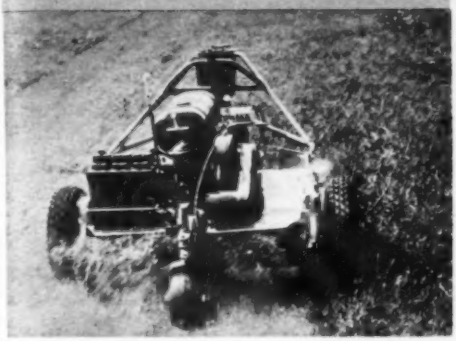
sheath has a sharpener built into it which hones the knife blade. The sheath (shown in the photo above) was awarded patent 2,767,530.

A big polyethylene plastic bag which is placed over a tree by a boom truck got patent 2,953,870 for George J. Nelson of Milwaukee, Wis. The .003-inch thick bag protects fruit trees from frost but permits enough sunlight to enter to mature fruit and keep the area warm. It can be left on all winter.

Bruce R. Blanchard of Derby, Conn. was given patent 2,952,091 for a gun that casts a fishing lure. It is designed to "eliminate the effort and special skill required" for this leisure-time activity.

A device that fits on a finger to moisten the glue on an envelope was invented by George C. Henderson, Detroit, Mich. Patent (2,954,-573) rights were assigned to Hallmark Cards, Inc. •

NOW SEE THIS!



ELECTRONIC mower from DeVry Technical Institute, Chicago, follows pattern of wires buried in sod, needs no other guidance. Once started in garage it does its job unpiloted, then puts itself away. A tensing unit shuts it off instantly if kids or other obstacles get in its way.

EMERGENCY FLASHER that runs on two flashlight batteries, has suction cup to hold to smooth surfaces, shows bright red signal 500 feet. $2.95 ppd. from Henesco, 928 Broadway, New York, N. Y. Flashers are two for $5.00.

free ALLIED

MONEY-SAVING 1961 ELECTRONICS CATALOG

444 PAGES
COMPLETE UP-TO-DATE

only $2 down on orders up to $50; only $5 down up to $200; $10 down over $200

SAVE MOST ON

EVERYTHING IN ELECTRONICS

Send for this leading, value-packed catalog featuring everything in Electronics, including products available only from ALLIED. Whether you're a kit builder, experimenter, hi-fi fan, Amateur, serviceman or engineer, you'll save most on:

- KNIGHT-KITS®—Best in Build-Your-Own
- Everything in Stereo High-Fidelity
- KNIGHT® Super-Value Stereo Hi-Fi
- Tape Recorders & Phono Equipment
- TV Tubes, Antennas, Accessories
- Parts, Tubes, Transistors
- Everything in Tools & Technical Books
- Amateur Station Equipment
- Citizen's Band 2-Way Radio
- Public Address & Paging Systems
- Latest Test & Lab Instruments

SAVE on everything in Electronics at ALLIED—get fastest shipment, expert personal help, easiest-pay terms, satisfaction guaranteed or your money back. Send coupon for FREE 1961 ALLIED Catalog.

SEND FOR FREE CATALOG

YOU CAN DEPEND ON THE WORLD'S LARGEST ELECTRONIC SUPPLY HOUSE

our 40th year

ALLIED RADIO

ALLIED RADIO, Dept. 6-A1
100 N. Western Ave., Chicago 80, Ill.
☐ Rush FREE 1961 Allied Catalog No. 200

Name _____
PLEASE PRINT
Address _____
City _____ Zone _____ State _____

BIG MONEY OR EXTRA INCOME
Home Appliance Repair

LEARN TO EARN MORE... QUICKLY AND EASILY!

Wide-open field for men of all ages. Millions of Home Appliances need fixing . . . Every home is your market for **Full-Time Career** or **Spare-Time "Second Income"** opportunities. Save on your own repairs. N.T.S. Shop-Tested HOME TRAINING is **streamlined, modern, low-cost, practical.** Qualifies you fully and you start earning early in your course. Includes **Tools and Appliance Tester.** Send for **FREE** Opportunity Book and actual lesson. No Obligation. **No Salesman Will Call!**

NATIONAL TECHNICAL SCHOOLS MA-11
Los Angeles 37, California

Name_____ Age_____
Address_____
City_____ Zone_____ State_____

FREE BOOK

FREE Famous Electronics **CATALOGS** from **RADIO SHACK**

Mail coupon now—get free catalogs for 12 full months!
- See the world's biggest and best line of electronic equipment at savings up to 50%
- Hi-Fi, Ham Radio, Stereo, Transistors, Kits and Parts
- Easiest terms—low as $2 down
- Your satisfaction guaranteed

RADIO SHACK CORPORATION Dept. 61A1
730 Commonwealth Avenue, Boston 17, Massachusetts
Please send me Radio Shack's famous electronics catalogs for the next 12 months—all FREE and POSTPAID.

Name_____
Address_____
City_____ Zone_____ State_____

Learn **WATCH REPAIR** now!

You can learn this new Sweazey Way at home
Start making repairs right away. Develop skill step by step with modern, simplified methods. Tuition only $5 monthly. Special Tools provided. Inquire without obligation.

FREE booklet and sample lesson

CHICAGO SCHOOL OF WATCHMAKING
2338 Milwaukee, Dept. 611, Chicago 47, Ill.

START IN RADIO-CONTROL

ARISTO CR-1 CARRIER WAVE RECEIVER —$12.95. A simple tube carrier unit designed with trouble-free simplicity of circuitry. High sensitivity and stability make it far superior to any receiver of this type. Light weight, rugged design, compact.

SPECIFICATIONS — Size: 1¼" x 1⅝" x 2¾" • Wgt: 2 oz. • Latest F.C.C. Frequencies 26.995 thru 27.255) • Hi-Fi Quality Components.

RANGEMASTER IAP TRANSMITTER—$19.95. The Model IAP Transmitter is for carrier wave, use; the perfect companion to the CR-1 Receiver. It transmits on the latest examination free frequencies with max. range. Complete with chromed Telescopic antenna and instructions.

SPECIFICATIONS — Size 3"x5"x8" • Special "Buddy Switch" (no aid needed when model is being range-checked) • Efficient Stable Circuit • Factory Tested and Guaranteed.

RECHARGEABLE WET CELL BATTERIES

#26G.	2V.	6 amp. hr. cap.	$3.75	#23. 2V.	3 amp. hr. cap. $1.75
#228.	2V.	28 amp. hr. cap.	8.98	#41. 4V.	1.5 amp. hr. cap. 1.65
#210.	2V.	10 amp. hr. cap.	5.75	#61. 6V.	1.5 amp. hr. cap. 2.75
#26.	2V.	6 amp. hr. cap.	3.00	#64. 6V.	4 amp. hr. cap. 1.25

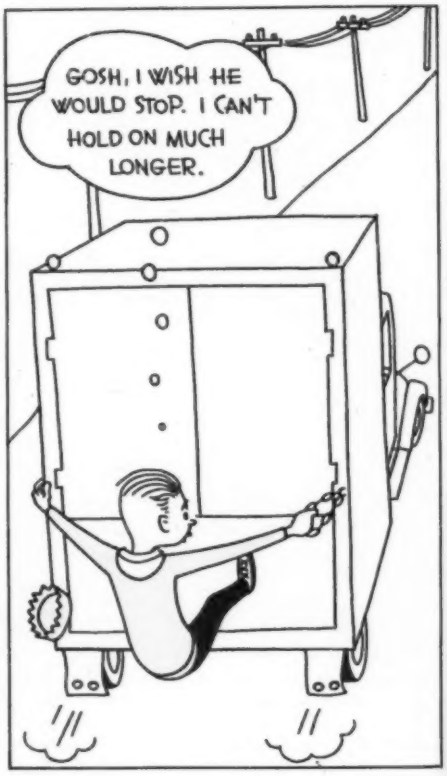
R.C. • Planes • Engines Catalog, 144 Pgs. 75¢ • Free Hobby Fun Catalog

POLK'S HOBBIES, 314 Fifth Ave., Dept. M161, N.Y. 1, N.Y.

SHOE SHINE KIT

Self-contained shoe shining kit made by Johnson's Wax has sponge-plastic applicator, and buffing cloth, both fitting into top.

DON'T DO-ITS



START YOUR OWN BUSINESS

REPAIR ELECTRIC APPLIANCES

WE FURNISH YOU THIS AMAZING ELECTRONIC KIT

EARN WHILE YOU LEARN IN SPARE TIME

If you are mechanically inclined (like to fix things and work with tools) we can teach you this fascinating, big money field.

EVERYTHING SENT TO YOU

Illustrated lesson manuals, testing equipment, business building aids, where to buy parts wholesale, what to charge all sent to you.

$5.00 - $6.00 AN HOUR

Often charged by service technicians for making ordinary repairs. We show you how to rewind motors, repair refrigerators, vacuum cleaners, washer-dryers, etc.

GET A BIG PAYING JOB

Christy training enables you to apply as a first class electrical service technician at good wages. The need for trained men is great . . . the supply is limited.

MAIL THIS COUPON TODAY

Send for FREE BOOK and PAY LATER PLAN

Christy trades school, Dept. A-9506
3214 W. Lawrence Ave., Chicago 25

Please send me your FREE Book on Electrical Equipment Servicing and full facts about how I EARN AS I LEARN.

Name .....Age.....

Address .....

City .....Zone.....State.....

MEN WANTED

Earn $125 Per Week and up AUTO DIESEL MECHANICS

Master a trade with a future — learn Auto-Diesel mechanics in our shops. You learn with tools on real equipment. Earn while you learn. Many of our graduates earn $125 per week and up. No previous experience necessary. Day and night courses. Approved for veterans.

Write for free bulletin,
AUTO-DIESEL COLLEGE
226 7th Ave., N., Dept. 50
Nashville 3, Tenn.

GEARS

In Stock - Immediate Delivery

Gears, speed reducers, sprockets, thrust bearings, flexible couplings, pulleys, etc. A complete line is carried in our Chicago stock. Can also quote on special gears of any kind. Send in your blueprints and inquiries.

Send for Complete Catalog No. 15

CHICAGO GEAR WORKS
440-50 N. Oakley Blvd., CHICAGO 12, ILL.

221 STAMPS 25¢

plus 88 FLAGS OF THE WORLD
plus PLANET MAIL SOUVENIR SHEET

Poland Mushroom Triangle

Cayman Islands Cat Boat

Colombia Miss Universe

Look what you get for only 25¢! You get the stamps shown here — plus *Indonesia* "Wild Cow" Stamp, *Germany* "Sputnik", *Transjordan* King Edward (over 50 years old), *French Antarctica* bird set, *St. Pierre, Grand Comoro*, etc. Total 221 stamps — all different! You also get 88 Flags of the World in full color — plus unique Planet Mail Souvenir Sheet. All this for 25¢ to introduce our Bargain Approvals. Midget Encyclopedia of Stamps included FREE.

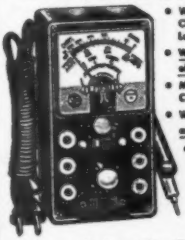
Send 25¢ Today. ASK FOR LOT FP-21
ZENITH CO., 81 Willoughby St., Bklyn 1, N.Y.

Superior's New Model 70 UTILITY TESTER®

FOR REPAIRING ALL ELECTRICAL APPLIANCES

MOTORS • AUTOMOBILES • TV TUBES

As an electrical trouble shooter the Model 70:



- Will test Toasters, Irons, Broilers, Heating Pads, Clocks, Fans, Vacuum Cleaners, Refrigerators, Lamps, Fluorescents, Switches, Thermostats, etc.
- Will test all TV tubes for open filaments, interelement shorts, burned out tubes, etc.
- Measures A.C. and D.C. Voltages, A.C. and D.C. Current, Resistances, Leakage, etc.
- Will measure current consumption while the appliance under test is in operation.
- Incorporates a sensitive direct-reading resistance range which will measure all resistances commonly used in electrical appliances, motors, etc.
- Leakage detecting circuit will indicate continuity from zero ohms to 5 megohms (5,000,000 ohms).

As an Automotive Tester the Model 70 will test:

• Both 6 Volt and 12 Volt Storage Batteries • Generators • Starters • Distributors • Ignition Coils • Regulators • Relays • Circuit Breakers • Cigarette Lighters • Stop Lights • Condensers • Directional Signal Systems • All Lamps and Bulbs • Fuses • Heating Systems • Horns • Also will locate poor grounds, breaks in wiring, poor connections, etc.

Model 70 comes complete including 64 page book, only..... **$15.85**

SHIPPED ON APPROVAL

NO MONEY WITH ORDER — NO C.O.D.

Try it for 10 days before you buy. If completely satisfied then send $2.85 and pay balance at rate of $4.00 per month for 3 months — No Interest or Finance Charges Added! If not completely satisfied, return to us, no explanation necessary.

MOSS ELECTRONIC, INC.
Dept. D-842, 3849 Tenth Ave., New York 34, N. Y.
Please rush Model 70. If satisfactory, I will pay on terms specified. Otherwise I will return tester.

Name _____

Address _____

City _____ Zone _____ State _____

All prices net. F.O.B. N.Y.C.

ADULTS AND CHILDREN—LEARN EASILY, QUICKLY

Just think what it can mean to you in dollars and cents, confidence, success, fun to learn a language, speech, statistics, facts, figures, music, bridge, school work, *anything*—OVERNIGHT . . . while you sleep and learn it FASTER—BETTER.

That really happens when scientifically proved Dormiphone "works" to train your memory *for you* awake and asleep . . . and what's more this amazing instrument "plays" for you, too, provides fine entertainment. Get the scientific evidence TODAY. Write for FREE Book with complete details or come in for FREE Demonstration. No obligation.

MODERNOPHONE, INC., 373-011 Radio City, N.Y. 20, N.Y.
Gentlemen: Please send me your FREE Book. I am interested in learning more about the DORMIPHONE and what it can do for me and my family. No obligation—no salesman will call.

NAME _____
ADDRESS _____
CITY _____ ZONE _____ STATE _____
My main interest in Dormiphonics is for:
( ) Language Learning ( ) Speech Improvement
( ) Memorization ( ) Bridge Rules ( ) School or College Work

Lift the hood to a bright future as an

AUTO MECHANIC

Over 40,000 mechanics must be trained each year. Enjoy steady work, top pay, freedom from layoffs. Go in business—25,000 repair shops needed. *Train at home.* New CTI plan provides 30 Job Experience Projects. Mechanic's tools, tune-up kit, and Vise-Analyzer sent. Diesel or Body-Fender lessons included. Earn money as you train. *Mail coupon.*

COMMERCIAL TRADES INSTITUTE A-90
1400 GREENLEAF AVE. • CHICAGO 26, ILL.
Name _____ Age _____
Address _____
City _____ Zone _____ State _____

Print Your Own

Cards, Stationery, Advertising, Circulars, labels, photo and movie titles, church work, tags, etc. Save money. Sold direct from factory only. Raised printing like engraving, too.

Own a Printing Business

Print for Others, Good Profit. Have home shop. Junior press $15; Senior $29 up. We supply everything. Easy rules. Pays for self in short time. Write now for free details.

KELSEY PRESSES, Z-9 Meriden, Conn.

New Isotronic Training Method

LEARN TV REPAIR IN ONE SHORT WEEK!

Now, after 5 year's research—a streamlined training system that *obsoletes all others!* In just 7 days you may earn $150 weekly, without paying up to $250 for training, studying long months! Developed by electronic scientists *in cooperation with major* TV mfr's., the new Isotronic method is the most *practical* ever devised! For conclusive proof, write for details and FREE SAMPLE LESSON. Use it on your own set or a friend's—repair it—convince yourself you can make *big money immediately* in your own TV business! Hurry—Free Lesson supply limited. Write:

T. V. Servicing Systems, Dept. E-151
1038 So. La Brea, Los Angeles 19, Calif.

NEW LOOK IN CRICKETS

THE Australian cricket is gradually replacing the native American earthworm as the freshwater fisherman's basic live bait—a result of scientific cricket breeding on a large scale.

The commercial breeding of crickets has become a big business in the South. In this area the earthworm has dropped far behind in popularity among anglers of lake and stream. It's a trend bound to spread nationally as word gets around that most freshwater fish can't resist the lure of these black, fat little products of the commercial cricket ranches.

One great advantage the cricket has over the earthworm is its rugged natural collar around the midsection. As a result, when the hook is fastened under the cricket's collar, a fish usually has to swallow the whole thing—it won't tear loose by nibbling the way a worm will.

Crickets are raised in breeding rooms that are kept dark, at a temperature around 85°F. In this atmosphere the cricket has no sense of seasons. Consequently, females lay their eggs right around the calendar.

Female crickets lay their eggs one at a time. It takes 12 days for the egg to hatch; seven weeks later the cricket is large enough to be shipped to market. Cricket ranchers sell their product to dealers for about $7.50 a thousand. They can be raised in basements and backyards, on a small scale. While a great many crickets escape, they reproduce so consistently and mature so swiftly that a rancher's profits are not seriously hurt by those that get away.

One of the largest ranches of this kind is located in Memphis, Tenn. The ranch is run by Ray Selph, who raises crickets in five different buildings covering an area of nearly 40,000 square feet. The buildings hold an estimated 15 million crickets. They live in long rows of wood boxes filled with excelsior. In 1960 this ranch shipped about 50 million chirpers to dealers. During the fishing season the Memphis ranch boxes and ships about 400,000 crickets a day in 1,000 and 2,000 lots.

Each week the ranch uses five tons of chicken mash shoveled by some 30 employees to feed the insects.

If the traditional American earthworm is doomed as the basic bait for the nation's lake and stream anglers, you'll have to chalk it up to this off-beat development of scientific cricket breeding. •

—*Duane Decker*

NOW SEE THIS!

UNION CARBIDE'S new silicone finish for silver hollowware will soon be available in an aerosol spray dispenser. Less than one ten-thousandths of an inch thick, the coat will prevent tarnishing and eliminates polishing as even fingerprints won't "take." The finish is also being applied at the factory on some lines of silver hollowware. It resists food stains, including such items as vinegar and coffee.

HEART monitor, first used in human surgery, has been adapted for veterinarians by NCG Division of Chemetron Corp. Battery-powered device is connected to animal's body during surgery and emits audible "beeps" that tell surgeons the electric-wave activity of the heart. The monitor weighs six ounces and is five inches long. The puppy's name? Beeps!

YOU can acquire

LAW AT HOME! EARN LL. B. DEGREE

LaSalle's famous Law Library—used as reference in many Law libraries and Law offices—has enabled thousands to master Law surprisingly fast, in spare hours at home, for business and professional advancement.

These 14 remarkable volumes, compiled by leading professors and lawyers, cover the whole basic field of Law in condensed, orderly, simplified manner.

You advance rapidly with this great library, plus special lectures furnished. We guide you step-by-step with personalized Problem Method of instruction...you *learn by doing*—handling legal problems—not by memorizing rules.

Send for two FREE booklets, "Law Training for Leadership," and "Evidence," answering questions about Law and its value to you. Mail coupon below. No obligation.

Accredited member, National Home Study Council

LA SALLE EXTENSION UNIVERSITY
A Correspondence Institution

417 S. Dearborn St. Dept. 1493L Chicago 5, Ill.

Send me your two FREE booklets described above, without obligation

Name.....*Age*.....

Street.....

City, Zone & State.....

Draw CARTOONS

*U.S. Pat. Applied For

Learn at Home in Spare Time... EARN BIG MONEY

You don't need previous training or art ability with the "Famous System of Manual Training!"* With this modern streamlined method, you learn rapidly, easily ...start to cartoon immediately, without tedious study or exercises.

WIDE DEMAND FOR CARTOONISTS ... EARN WHILE YOU LEARN

...Magazines, newspapers, movies, television, ad agencies—all are searching for new cartoon ideas and talent. As a successful, Continental-trained Cartoonist, your earnings are not limited. Many of our students start earning after first few lessons. A wonderful pastime, too.

WE SUPPLY EVERYTHING... As our student, you receive FREE of extra cost a big 15-piece Professional Kit with all equipment and materials you need, and valuable Articulated Model to help you draw any human pose.

GET ALL THE FACTS FREE... Big, colorful Free Catalog gives all details, plus pages of useful information. Use coupon now.

Continental Schools, Inc.

DEPT. MI-1, 4201 S. BROADWAY, LOS ANGELES 37, CALIF.

SEND COUPON FOR FREE BOOK

Continental Schools, Inc.
Dept. MI-1, 4201 S. Broadway, Los Angeles 37, Calif.
Please rush me your Free Catalog and other information by return mail. No charge or obligation, no salesman will call.

NAME _____

ADDRESS _____

CITY _____ ZONE ____ STATE _____

Now You Can Get More Than Half of Your VITAMINS AT NO COST

YOU CAN NOW SAVE ⅔ TO ¾ ON YOUR FAMILY VITAMINS. And **HOW?** Simply buy **KOR-VAL** vitamins. That's All.

And there are many more values like these listed in Kor-Val's new exciting catalog. And you can be SURE you're getting the best your money can buy. Because... the govermnent sets the standards for vitamins... for your protection. We set the price for your benefit. Kor-Val gives you everything you want in vitamin value... the utmost in quality any manufacturer can guarantee under strict government regulation.

The Kor-Val Vitamins Catalog contains beneficial information on vitamins and minerals. Why vitamins should be used as supplemental nutrition. Complete descriptions and uses of important vitamins, children's formulas and many more pages of interesting facts concerning health.

TYPICAL VALUES:	KOR-VAL PRICE	COMPARABLE NAT. BRAND (Fair Trade Price)
IMPROVED THERAPEUTIC FORMULA WITH B12	$3.25	$8.48
VITAMIN A 25,000 UNIT (100 caps.)	$ .75	$4.00
VITAMIN C—250 mg. (100 tab.)	$ .85	$4.00
9 VITAMINS PLUS B12 (250 caps.)	$3.45	$8.98
THERAPEUTIC FORMULA WITH MINERALS AND B-12 (100 caps.)	$3.98	$9.87
GERIATRIC FORMULA (100 caps.)	$3.40	$7.11

SEND TODAY... *now!* For Kor-Val's FREE 32-page catalog. The values you can *get* only through **E. J. Korvette,** one of the NATION'S LARGEST CHAIN OF DEPARTMENT STORES.

E. J. KORVETTE, Dept. 917
12 East 46th St., New York 17, N.Y.

E. J. KORVETTE, Dept. 917
12 East 46th St., New York 17, N.Y.

Rush me Kor-Val Vitamin Catalog at no cost.

☐ Send Vitamins indicated_____

Please enclose check or money order. (Sorry, no C.O.D.'s)

Name_____

Address_____

City_____ Zone____ State_____

THE ORIGINAL PACKAGED

KITS

● World's Largest Line—New Fiberglass Hulls. Over 200 styles Boats-Kits, Formed-Hulls, Semi & Custom finished. All types: Prams, Cruisers, Racers, Inboards, Outboards. Easy to build. Professional results. Dealers-Agents inquire.

Send 35¢ for Colored Catalog
52 pg. Kit Catalog plus 20 pg. Hardware and 8 pg. Armor Glass books.
(SPECIAL OFFER!)
Colored CATALOG plus "Boating Handbook"...all for $1.

CUSTOM • CRAFT Buffalo 7N, N. Y.

SCIENCE ENGINEERING

Bachelor's degree in 27 or 36 months

Accelerated year-round program: Aeronautical, Chemical, Civil, Electrical, Mechanical, Metallurgical; Math., Chemistry, Physics. Modest rate. **Earn board.** New classes start Jan., Mar., June, July, September.
1011 E. Washington Blvd., Fort Wayne 2, Indiana

INDIANA TECHNICAL COLLEGE

DRAW The First Day!

NO LESSONS! NO TALENT!

New Amazing Invention—"Magic Art Reproducer." You can draw Your Family, Friends, Anything From REAL LIFE—Like An Artist Even If You CAN'T DRAW A Straight Line! Anything you want to draw is automatically seen on any sheet of paper thru the "Magic Art Reproducer." Then easily follow the lines of the "picture image" with a pencil for an original "professional looking" drawing. Also reduces or enlarges. SEND NO MONEY! Free Trial! Pay Postman on delivery $1.98 plus postage. Or send only $1.98 with order and we pay postage. Money Back Guarantee.

10 Day

NORTON PRODUCTS, Dept. 478, 296 Broadway, N.Y.C. 7

FREE CATALOG

MAKE YOUR OWN RODS AND LURES

Send for FREE Wholesale Catalog. The most complete and fully illustrated catalog of reels, rods, beads, spinners, jigs, lure bodies and parts, sinker molds, feathers, tools, hooks, rod blanks, rod parts, swivels, wire, etc. Over 170 pages.

FINNYSPORTS, 2261X Sports Bldg., Toledo 14, Ohio

FREE CATALOG

The WORLD'S FINEST ELECTRONIC GOV'T SURPLUS BARGAINS:

Transmitters, Receivers, Meters, Microphones, Headsets, Amplifiers, Motors, Generators, Gyros, Automatic Pilots, Test Equipment, Telephone Equipment, Etc.—Etc. Send for your FREE Catalog today.

Address Dept. MI-1

FAIR RADIO SALES • P.O. Box 1105 • LIMA, OHIO

GENUINE ALNICO

MAGNETS

AMAZING, PERMANENT, NON-ELECTRIC. HIGHLY PRACTICAL.
Conduct interesting experiments. Hundreds of uses. Retrieve valuable steel items such as guns, tackle from fresh or salt water; tools from tanks & drains. **GUARANTEED.** Try any magnet one week. Money back if you are not well-pleased.

No. I-710 (Wt. 53 oz.) Has pull of 225 lbs. on steel block.....$18.00
No. I-625 (Wt. 70 oz.) Has pull of 125 lbs. on steel block.....$10.00
No. I-575 (Wt. 18 oz.) Has pull of 75 lbs. on steel block.....$ 7.00
No. I-500 (Wt. 13 oz.) Has pull of 50 lbs. on steel block.....$ 5.00
No. I- 90 (Wt. 5 oz.) Has pull of 15 lbs. on steel block.....$ 3.50
No. I- 47 Hot Pad Magnets. 10 for $1.00.....50 for $ 4.87
No. I- 35 Hobbyist assortment of 8 magnets.....$ 2.00

Send M.O. or check. We pay postage. Sorry no C.O.D.'s.

MIAMI MAGNET COMPANY, 3248 N. W. 27th Ave., Miami 42, Fla.

Not everyone does as well, but T. K. Cody, who started a business of his own, reports...

For 12 months I've averaged

$800 PER MONTH INCOME

—most of it clear profit for me!

Many men have discovered how to be independent, to be free of layoffs and bosses. C. G. Naples grossed more than $200 his first week. A father-son combination grossed $44,000 their second year. H. Lemon says, "*I netted $133 in one 8-hour day.*"

How much you make depends largely on you. You need no special skill, no large investment. Start part time if you wish.

NO SHOP NECESSARY • Our Electric Deterger shampoos rugs, carpets right on floor—removes dirt and grime and helps to show their natural color and beauty. So efficient and safe it is used by largest railroads and hotels.

This is not a lease proposition. *You own the machine, you work when and where you please and all the money you take in is your own. You take no risk. Machines fully guaranteed.*

MAIL COUPON TODAY FOR FREE BOOK

VON SCHRADER MFG. CO.
112 "R" Pl., Racine, Wisconsin

Without obligation send me **FREE** booklet about your **RUG DETERGER** and tell me how I can **start** *my own* permanent, profitable business.

Name_____

Address_____

City_____ Zone____ State_____

SMALL! POWERFUL!

ECONOMY TRACTOR

Unequalled value! Low price!

America's finest tractor. Rugedly built. Easy to operate. 750 lbs. Borg-Warner clutch, trans. and diff 140 to 1 reduction. 40% more drawbar pull than ordinary tractors 5-1/4 H. P. engine. 20 quick change implements. HOOD, FENDERS.

Thousands in Use Write for complete details.

Engineering Products Co.
1005 S-1 Anska Avenue, Waukesha, Wisconsin

New, Easy Way To Get Your HIGH SCHOOL DIPLOMA!

Your chances of getting ahead are so much better with a high school diploma! Now you can finish high school at home, without interfering with your job. Simplified Wayne training offers your choice of the approved subjects you need. Diploma awarded. If you are 17 or over and have left school, write for FREE Sample Assignment in English Review and catalog today! *Accredited Member, National Home Study Council.*

Wayne School of LaSalle Extension University
A Correspondence Institution
419 So. Dearborn St., Dept. 1493W, Chicago 5, Ill.

Magic Mail Plan-Make up to $5 an Hour!

THIS MAN . .
. . . is taking out of the machine a Plastic Sealing Job — ordered by mail — only 1¼c in material cost brings back $2.50 in cash by mail. Capacity of machine: $28.00 profit per hour of operation.

Get ORDERS and CASH from your mailman—do work in SPARE TIME at home —or expand into FULL TIME business.

Send coupon for Free facts about the newest and most fascinating of all home operated businesses. For the first time a simplified machine brings the fabulous profits of **Plastic Sealing** and **Plastic Laminating** within the reach of the small operator. Anyone can learn to operate the machine with a few minutes practice—then with our **Magic Mail Plan** can get mail orders pouring in daily with cash in every envelope. ***No canvassing—no selling.*** We even supply the circulars you mail to bring back cash and orders. Don't waste a minute. Rush your name. We'll send you FREE and postpaid, pictures, prices, details, and all the facts you need to start. Mail coupon or send name on postcard. No charge.

Warner Electric Co., 1512 Jarvis Av., Dept. L-4-A, Chicago 26, Ill.

Get into PLASTIC LAMINATING *at home*

Make Thousands of Beautiful Art Creations

COSTUME JEWELRY • CIGARETTE BOXES TRAYS • CANDLESTICKS • COASTERS LAMP BASES • BOOK ENDS....ALL IN SPARKLING COLORED PLASTIC

WARNER ELECTRIC CO., 1512 Jarvis Av. Dept. L-4-A, Chicago 26, Ill.
At no cost to me, please rush complete details postage prepaid. I am under no obligation.

Name_____

Address_____

City_____ Zone____ State_____

new home-import business...

Now you can get exciting Imports at trifling cost abroad and sell them by mail order, or to friends and stores. New Plan starts you in full or spare time without capital or previous experience. Just imagine the *huge profit* you could make on this 17-jewel watch you can get for only $2.87 in Europe—the 16-mm camera at just $2.30, the transistor radio or the hunting rifle. Mellinger globe-trotting couriers discover and show you how to get fast-selling imports just like these—Show you how you can deduct your profit in advance, even *before* ordering merchandise.

Famous World Trader Guides You

You'll receive personal step-by-step guidance from B. L. Mellinger, one of the most famous international traders the world has ever known. Mr. Mellinger even shows you how to put experience you have gained through jobs, hobbies and interests to work making extra import profits for you.

You Keep ALL the Profits

This is a NEW idea for making money. Not a catalog "scheme" or franchise distributor "deal" where you buy catalogs and imports from others and watch them turn the *real* wealth of your labor into luxuries for themselves. *Mellinger puts you in direct contact with the ORIGINAL OVERSEAS SOURCE!* He makes no profit on your imports. The profits are all yours. On one of the lower priced products shown here, an importer following the Mellinger Plan has already taken in *a half million dollars!* You, too, can cash in on the big demand for imports, if you know this method.

Free Samples—CONTACTS ABROAD

Following the Mellinger Home-Import Plan you receive FREE imports—and membership in International Traders, a world-wide organization of Importers and Exporters which helps beginners to a fast start. You will receive confidential monthly bulletins revealing names and addresses of actual overseas suppliers. You are shown how you can easily deal with foreign suppliers, how to get samples, how to make big savings on your *own* purchases.

Rush Coupon for FREE Details

Start now to exciting cash profits in the new Import boom. Mail coupon for FREE BOOK, "Success Stories in World Trade," which will change your whole idea of the money you can make, full or spare time, in your own Home Import Business. No salesman will call. Airmail reaches us overnight.

Send for FREE Book!

MELLINGER CO., Dept. T261
1717 Westwood Blvd., Los Angeles 24, Calif.

Show me how these amazing buys abroad can give me my own big profit Home Import Business. Rush book and details without obligation. ALL FREE!

NAME _____

ADDRESS _____

CITY & ZONE _____ STATE _____

MELLINGER CO.,
Dept. T261 • 1717 Westwood Blvd. • Los Angeles 24, Calif.

MI Classified Ads

Your advertisement can reach this mail-buying audience of more than a million readers for only $1.10 per word . . . payable in advance (Check or M.O. please) . . . minimum 10 words. Copy to be inserted in March issue must be in the office January 3. Mail to MECHANIX ILLUSTRATED, 67 West 44th St., New York 36, N. Y. Word count: Zone number free. Figure one word: Name of state (New Jersey), name of city (New York); sets of characters as in key (14-D); also abbreviations as 35MM, 8x10, D.C., A.C.

SAVE MONEY • ORDER BY MAIL

• • • ADVERTISING & BUSINESS SERVICES

ADVERTISE: 24 WORDS, 100 Canadian Newspapers, $5.50. Lists Free. Advertising Bureau, 10511-B Springfield, Chicago 55.

• • • AGENTS WANTED

$25 DAY EASY with 60% Profit! Friends, neighbors will thank you for demonstrating new beauty secrets and glamorous ways to use famous Studio Girl Hollywood Cosmetics. Information I send quickly qualifies you as Beauty Advisor. $5.00 hour for spare time alone . . . or $25 day full time. Send name on postcard to me personally for free samples, details. Harry Taylor, Studio Girl Cosmetics, Dept. 5011X, Glendale, California.

START MAKING Money Now. Earn top commissions taking orders for all magazine subscriptions. Friends and neighbors are your prospects. No experience needed. Write for free money-making kit. McGregor Magazine Agency, Dept. 211A, Mount Morris, Illinois.

WILL YOU test new items in your home? Surprisingly big pay. Latest conveniences for home, car. Send no money. Just your name. Kristee 79, Akron, Ohio.

YOUR OWN business—Suits $1.50; Overcoats 65¢; Mackinaws 35¢; Shoes 12½¢; Ladies' Coats 30¢; Dresses 15¢. Enormous profits. Catalog Free. Nathan Portnoy Assoc., 2109-M Roosevelt Rd., Chicago 8, Ill.

AUTOMATIC BED warming sheet, you sleep on, not under. Outsells electric blankets 10 ways, costs less. Generous profits. Patented Products Corp., Dept. MX161, Danville, Ohio.

PRINTING, ADVERTISING Salesmen—Excellent moneymaking sideline selling Decalcomania Name Plates, small quantities. Automobile initials. Sign Letters. Free Samples, "Ralco," XL, Boston 19, Mass.

YOUR FREE copy of World's biggest sales magazine tells you how and where to make more money on your own in selling. Specialty Salesman Magazine, Desk 78, 307 North Michigan, Chicago 1.

$25 DAY, EASY. New fire extinguisher. Retails $2.95. Profit $2.00. Details Free. Edconco, P. O. Box 2877, Grand Cen. Sta., Dept. M-1, New York 17, N. Y.

EVERY MAN A Prospect. Refundable sales kit offer showing line belt buckles, tie clasps, money clips, cuff links, lapels, identification badges, individualized with customer's name and emblems. Cap badges for trucking, bus, taxi, police, firemen, also heavy construction emblems. Choice 3000 emblems. Hook-Fast, Box 1425MI, Providence, R. I.

CLEANS WINDOWS without mess. Strange "dry" cleaning-cloth. Replaces liquids. Windows gleam. Samples sent on trial. Kristee 80, Akron, Ohio.

BIGGEST SPARE-TIME Profits Now from 1961's fastest-selling Greeting Cards, Gifts, Stationery. Compare our low wholesale prices. Cash bonus to 10%. No experience needed. Lovely $1.25 Gift offered Free with samples on approval. Cardinal, 1400 State, Dept. 30-G, Cincinnati 14.

SELL CHAMPION, AC, Autolite spark plugs. Reconditioned, electroplated, guaranteed 10,000 miles. 100% profit. Free sample. Lee Spark Plug Co., 1608-M Roberts, Houston 3, Texas.

MAKE PROFITABLE Men's-Women's wear. Sample Free. Sunmade, Brockton 64, Massachusetts.

JAPAN'S FINEST! Exotic Earrings! Details Free. OHGA, MI-228, Sigakenkusatu, Japan.

TEAR OUT This Ad, and mail with name, address for big box of home needs and cosmetics for Free Trial, to test in your home. Tell your friends, make money. Rush name. Blair, Dept. 65EA, Lynchburg, Va.

SELL GREETING Cards — Make Extra Money in spare time. Show value-packed, guaranteed Greeting Card Assortments, Gift Wrappings, Stationery, Gifts, Costume Jewelry, Housewares. Folks buy on sight! Amazing profits. Experience unnecessary. Write for Salable Samples on Approval, Free Catalog, Sales Plan, Free Gift Offer! Hedenkamp, 361 Broadway, Dept. MI-50, New York.

FREE! BEAUTIFUL Mexican Curios! Rush 30¢ stamps (Refunded). Sylviam, Apartado 9036, Mexico City.

SELL GOLD Sign Letters, Numbers. Free Samples. Hasseling Signs, Potosi, Wisconsin.

• • • SALESMEN WANTED

EARN BIG Commission Full Or Part Time. Build profitable business of your own selling America's largest line low priced business printing. 360 page catalog samples hundred of items used daily by business people. Imprinted ball pens low as $8.95 for 100. Big full color catalog low priced advertising specialties included. Free sales kit. National Press, Dept. 7, North Chicago, Illinois.

MONEY-MAKING OPPORTUNITY! Take Big profit orders for world famous Patented Varieties Fruit Trees. Also Flowering Shrubs, Roses, Vines. Big Sales outfit Free. Stark Bro's, Desk 30111, Louisiana, Missouri.

IF YOU'RE interested in making money in selling, see the hundreds of exceptional opportunities in Salesmen's Opportunity Magazine. Send name for your copy, absolutely free. Tell us what you're selling now, Opportunity, 848 N. Dearborn, Dept. 19, Chicago 10, Illinois.

SEEKING NEW Products? Get my outfit 47 money-making specialties. Latest conveniences for home, car. Send no money. Just your name. Kristee 105, Akron, Ohio.

MAKE EXTRA Money—Big Cash Commissions plus premiums for you and your customers. Sell Advertising Book Matches—sensational new Tenorama, Glamour Girls, Hillbillies; dozens others. All sizes—Quick daily sales; big repeat business. Free Master Kit makes selling easy—no experience necessary. Superior Match, Dept. F161, 7530 Greenwood, Chicago 19.

I'LL SEND you Free stocking sample newest advancement in hosiery since nylon. Patented, full-length. Stays up over-the-knee without supporters, without girdle! Nationally advertised price $1.95. Make money introducing to friends at $1.00 pair. American Mills, Dept. 352, Indianapolis, Indiana.

MAKE UP to $50.00 a day soliciting delinquent accounts. Terrific commissions. Write today. General Finance, 304W Pickwick Bldg., Kansas City 6, Mo.

START MAKING money now. Every business a prospect. Solicit delinquent accounts. Instructions free. Top commissions. National Credit, 304B Pickwick Bldg., Kansas City 6, Mo.

$1,000.00 A MONTH for making dramatic 3-second demonstration of amazing lightweight Presto Fire Extinguisher. New chemical used by Airforce Snuffs out fires instantly. Only $4.95. Terrific commissions. Millions want it. Free Kit. Merlite, 114 E. 32nd, Dept. P-66A, New York 16.

ANYONE CAN sell famous Hoover Uniforms for beauty shops, waitresses, nurses, doctors, others. Miracle fabrics—Nylon, Dacron, Wash 'N Wear Cottons. Exclusive styles, top quality. Big income, real future. Equipment free. Hoover, Dept. A-102, New York 11, N. Y.

GET NEW Shirt Outfit Free! Make $90 weekly on 5 average orders a day. Famous quality made-to-measure dress and sport shirts, $4.50 up, sell fast to all men. No experience needed. Full or part time. Write: Packard Shirt Co., Dept. 301, Terre Haute, Ind.

WILL YOU wear new suits and topcoats without one penny cost and agree to show them to friends? You can make up to $40.00 in a day even in spare time, without canvassing. Progress Tailoring Co., 500 South Throop St., Dept. R-326, Chicago 7, Illinois.

71,000 ADVERTISING NOVELTIES. Fifteen Samples — $1.00. Adelphia Specialty, Plymouth Meeting, Pa.

• • • BUSINESS OPPORTUNITIES

BRONZE BABY Shoes: Instructions, Equipment and Mountings for genuine Electroplating Process. Largest Supplier of all Plating Equipment, Supplies. Free Catalog. Hollywood Bronze Supply, Dept. B-5, 1624 East First, Los Angeles 33, Calif.

GROW ORCHIDS at home. Profitable, fascinating. Successful home grower explains special light, temperature and humidity conditions orchids need. Free—full details. Orchids, 100 S. Vermont, Los Angeles 4.

MI Classified Advertisements

FREE! NAME Brands Catalog! Your own high profit business. Sell Name Brands, full or part time. No inventory—no investment. More than 2000 Name Brand items; lowest wholesale prices. Watches, jewelry, cameras, hi-fi, stereo, radiophonos., appliances, housewares, hardware, power tools, luggage, musical instruments, garden equipment, sporting goods, toys, many others. 8 Floors of Name Brands. Million dollar inventory. Orders shipped complete within 24 hours. Send for Free beautifully illustrated catalog Now! Separate wholesale price list. H. B. Davis Corp., Dept. 16, 145 West 15 St., New York 16, N. Y.

MAIL-ORDER HOME Business. Get Free Copy, "Make Money in Mail-Order." Mailco, 1717 Westwood, Dept. T751, Los Angeles 24.

MONEYMAKING FRANCHISE can be exclusively yours. For free current franchise reviews information write Franchise Newsletter, H, 9 South Clinton, Chicago 6.

NEW HOME-IMPORT Mail Order Profitunity! Your mailbox stuffed with money! No selling. No experience. No investment. We supply everything. Free Details. Mail Order Distributors (Import Division) Dept. C31C, 15201 South Broadway, Los Angeles, Calif.

$70 WEEKLY—HOME, spare time. Simplified mail bookkeeping. Immediate income—easy! Auditax, 34757E, Los Angeles 34.

EXCEPTIONALLY PROFITABLE opportunity in Tape Recording! Free information. Baron's, Lynden, Washington.

$1.00 BRINGS YOU $18.00 Spare-Full Time Home-Business opportunity! Amazing new velvet-spray transforms old $$$$$ lamps, TV-radios, figurines, furniture—anything—into $$$$$ products! Free samples, 50 Business Opportunities Booklet. Send No Money. Flok-Kraft JY, Los Angeles 61.

BECOME TAX Consultant. Graduates earn $1,000-$3,000 every tax season preparing returns evenings. State approved. Union Institute, Lakewood (5V), N. J.

LEARN PROFESSIONAL TV Servicing in one week! Fabulous new simplified system. No big expense. No studying. No tools or equipment. Spare, full time. Own your own big profit business! Save! Amazing but true! Free! Write, TV Systems, Dept. EC-151, 1838 So. LaBrea, Los Angeles 19, Calif.

LEARN SEWING Machine repairing. To $125 weekly. Sparetime. Supplies. Add to present business. Write today! Taylor Service, Box 2126, San Bernardino, Calif.

PLATE BABY shoes, jewelry, gifts, bronze and colored pearl. We finance. Free booklet. Thomas, 11029 South Vermont, Los Angeles 44.

INCREDIBLE NEW "Table-Top" Machine manufactures over 15,000 saleable products. Also laminates, encases, moulds and plates in bronze, chrome, or copper. 20¢ materials produce $10.00 products. Free Confidential Details and Home-Business Plan. Plasti-Form, Dept. MI-1, Gardena, Calif.

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 2, 715 Ensor St., Baltimore 2, Md.

BUSINESS KIT Free! Postcard puts you in business! Complete line 230 shoe styles, jackets! New Discoveries pay Big Commissions. No investment. Send for Free Kit. Mason, Chippewa Falls K-364, Wisconsin.

BUY DIRECT from factories. Appliances, cameras, watches! Free details! Cam Co., 6810MI-20th Ave., Brooklyn 4, N. Y.

FREE PICTURE Folder, "How to Make $3,000 Yearly, Sparetime, Backyard, Raising Earthworms!" Oakhaven-45, Cedar Hill, Texas.

11,000 NEW PROSPECTS Daily. Baby record books, shoes, albums. Sell mail-order. Use our literature. Write: No-Co-Ro, Capitola 16, Calif.

INVISIBLE REWEAVING: $5-$10 per job possible reweaving burns, tears, mothholes. Spare-full time. Free details. Skil-Weave, Dept. RC-361, 335 W. Madison, Chicago 6, Illinois.

MARKETS EVERYWHERE. Make Artistic concrete birdbaths, pottery. Best coloring. Home workshop. Hundred varieties. Free pictures. Hollywood Cementcraft, 8527-E Wonderland, Hollywood 46, California.

$3.00 HOUR—HOME, sparetime, assembling pump lamps. Easy. Free Details. Ougor, Caldwell, Arkansas.

COLLECT NAMES for us, $1.00 each. Instructions 25¢. Wilson's Specialties, Box 61-J, Mt. Pleasant, Michigan.

$250.00 WEEK SPARE time profit possible. Earn at home with new fascinating Printing method. $5 starts you—send no money now. Free Confidential Facts and Valuable sample. Screen-Print, JY, Los Angeles 61.

BIG MONEY—Operate your own fix-it shop. Service all household appliances: irons, fans, refrigerators, automatic washer-dryers, etc. Do house wiring, commercial wiring. Rewind motors of all sizes. Sharpen mowers, skates, saws. Buy needed spare parts wholesale. Free Book. Christy Trades School, A-9606, 3214 W. Lawrence, Chicago 25.

PACKAGE AT Home For Profit! We supply everything. No selling, ready market. Free home business details. HPC, 2212RA Jesse Street, Los Angeles 23.

FREE BOOK "990 Successful, Little-Known Businesses." Work home! Plymouth-46R, Brooklyn 4, New York.

OPPORTUNITY TO earn $15,000-$30,000 annually. Franchise protected. Granted on $12,500 basis. Live at home. No merchandise to buy. Selfemployed. One of most exclusive and noncompetitive Businesses in United States and Canada. Send for free explanatory booklet. Harrell & Company, Box 8-F, Louisville, Ill.

$34.70 TWO HOURS. Manufacturing Concrete Products. No Selling. Castings #6, 2907 Dundee, Rapid City, South Dakota.

CASH FROM Sawdust, Tin-Cans, Newspapers. Over 200 methods. Instructions $1.00. Charles Company, 42-EPS, Norwood, Ohio.

LIQUID MOLDING Rubber, Free Sample. Shellcraft Supplies. Chaney, 1907-B East Road, Jacksonville 11, Fla.

COLORGLAZED CONCRETE pottery made without molds. Patented method. Cemetery products, novelties, files. Basement leaksealing. Moneymaking projects. Booklets, details free. Men only. National Pottery, Grand Rapids, Minnesota.

GROW MUSHROOMS. Cellar, shed and outdoors. Spare, full time, year round. We pay $4.50 lb. dried. We have 29,000 customers. Free Book. Mushrooms, Dept. 183, 2954 Admiral Way, Seattle, Wash.

MAKE $46 FROM Square Foot Plywood; Jigsaw necessary. Free Details. Woodet, Bridgewater, Mass.

BAKE NEW Greaseless Doughnuts In Kitchen. Sell stores. Free recipes. Irving, 3605 South 15th, Minneapolis 7, Minnesota.

WANTED: HOME producers, to be subcontractors. Cast plastic products for manufacturers in our Clearing House Service. Thousands of easily-made items required. Cash in at home, without previous experience. Plastic Service Associates, Dept. I-MI, East Boston 28, Mass.

PIANO TUNING learned at home quickly. Tremendous field! Musical knowledge unnecessary. Be independent! Information free. Empire School of Piano Tuning, Champaign, Ill. (Founded 1935).

MONEY MAKING Acme Saw and Lawnmower Sharpeners. Finest made. Easiest and most profitable to operate. Thousands of satisfied users. Terms. Free literature. Made and guaranteed by Max Manufacturing Co., 138 Stockton Ave., San Jose 26, Calif.

WANT TO Make Big Money At Home? $10.00 profit in an hour possible with Invisible Mending. Make tears, holes disappear from clothing, fabrics. Steady year-round demand from cleaners, laundries, homes. Details Free. Fabricon, 6254 Broadway, Chicago 40, Ill.

FRANCHISES MAKE Profits! Have your own prosperous franchise business. Opportunities nationwide for distributors, dealers, agency operators. Write today. National Franchise Reports, MI-528, 333 North Michigan, Chicago 1.

IMPORT-EXPORT OPPORTUNITY, profitable, world-wide mail-order business from home without capital; or travel abroad. Established world trader ships instructions for no-risk examination. Experience unnecessary. Free details. Mellinger, Dept. T751, Los Angeles 24, Calif.

FREE REPORT: "609 Odd, Successful Businesses." Box 1001-MIT, Evanston, Ill.

EARN BIG profits in practically unknown business. Information free. Baldwin, 826 South Conception, Mobile 22, Alabama.

$200.00 MONTHLY. SPARE Time. With Tablesaw, Bandsaw or Jigsaw. Write. Holiday House, Box 1825C, Vancouver, Washington.

$75.00 WEEKLY POSSIBLE mailing catalogs. Roe, 2317C Marshall, Chicago 23, Ill.

• • • HELP WANTED

FOREIGN EMPLOYMENT Information. Work overseas. Travel, adventure. Europe, Africa, Asia, Canada, Alaska. Earn as much as $1,600 monthly. Construction men, truck drivers, clerks, teachers, professionals, etc. Fabulous opportunities. Most complete information, application forms, etc. Sent by return mail same day received. Send $2.00 to Dept. M, Foreign Bureau, P. O. Box 512, New Orleans, Louisiana.

FOREIGN JOBS—Latin America, Alaska, Canada, up to $1500 monthly. Up-to-date 1961 Foreign Service Directory gives complete information; hot list of firms hiring for Military and Civilian Construction, Aircraft, Oil, Exporters-Importers, Mining. How-When-Where to apply. 13th successful year. $1.00. Global Reports, Box 8873-MI, Los Angeles 8, Calif.

FREE INFORMATION — USA Overseas Jobs, High Pay. Transportation. Futures, Dept. L, 215 West 34th Street, New York City 1.

SENSATIONAL NEW longer-burning Light Bulb. Amazing Free Replacement Guarantee—never again buy light bulbs. No competition. Multi-million dollar market yours alone. Make small fortune even spare time. Incredibly quick sales. Free sales kit. Merlite (Bulb Div.), 114 E. 32nd, Dept. C-74A, New York 16.

MAKE EXTRA Money selling advertising matchbooks. Free catalog and sales outfit. Matchcorp, Dept. MI-11, Chicago 32.

• • • MONEYMAKING OPPORTUNITIES

MAKE EXTRA Money—Big Cash Commissions plus premiums for you and your customers. Sell Advertising Book Matches —sensational new Tenorama, Glamour Girls, Hillbillies; dozens others. All sizes —Quick daily sales; big repeat business. Free Master Kit makes selling easy—no experience necessary. Superior Match, Dept. FX-161, 7530 Greenwood, Chicago 19.

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 15, 715 Ensor St., Baltimore 2, Md.

DETECTIVES—EXCELLENT Opportunities. Experience unnecessary. Detective Particulars free. Write, George Wagoner, 125-J West 86th, New York 24.

MAKE $5,000 YEARLY sparetime raising mink, chinchillas, nutria, etc. Free booklet reveals proved plans. Write: Furs, 588 Mt. Pleasant Road, Toronto 3, Canada.

MEN-WOMEN! START Money-Making Plastic Laminating Business at home in spare time. Material that costs 11¢ brings back $2.58. No canvassing or selling but mail orders bring in $20 a day. Write for full particulars Free. Rush name on postcard to Warner, Room CL-4-A, 1512 Jarvis, Chicago 26, Ill.

START YOUR Own Business On Credit (U.S. and Canada). Your own boss. 1396 Dealers sold $5,000 to $25,500 in 1959. We supply stocks, equipment on credit. 200 home necessities. Sales experience unnecessary. Pleasant profitable business backed by world-wide industry. Write Rawleigh's, Dept. A-U-MOM, Freeport, Illinois.

MAKE BIG Easy Profits making costume jewelry at home in spare time! Quick, easy to make; easier to sell! Details Free! Don-Bar, 3511 W. Armitage, Dept. A-211, Chicago 47, Ill.

$1,000. MONTHLY POSSIBLE, raising Earthworms—African Giants! Backyard, Garage, Basement. Complete Illustrated Booklet, explains raising, feeding, packing, marketing. Send 25¢! Ozark Worm Farm-4, Willow Springs, Missouri.

MAKE BIG Money with fast-selling line self-help Manuscripts—many titles! Imprints available; drop shipments if desired! Complete details to Established Mailorder Dealers only! Economy, Box 2580-MI, Greensboro, North Carolina.

BUSINESS OF your own. Earning potential as high as $40,000 annually. Issued on $12,500 base. No merchandise to buy. Send for free explanatory booklet. Harrell & Company, Box 8-FF, Louisville, Ill.

FIREPLACE WOOD is big business. Lickity Log Splitter with 7 h.p. engine and Hydraulic power gives production. Makes you profits. Details Free. Waco, Troy 15, Ohio.

START BIG-PAY Business At Home in spare time. No experience needed to operate little table-top machine for bronzing baby shoes. Make $5.46 profit on every pair. Full particulars free. Send postcard to Mason, 1512 Jarvis, Room CM-4-A, Chicago 26, Ill.

MAKE MONEY Clipping Newspapers. Write Newscraft, MI-983-E. Main, Columbus 5, Ohio.

MAIL LETTERS Featuring Real Merchandise—Get $10 orders in every mail—$8 profit. Everything furnished. Write: The Mailerette, 1502 South Lowell, Santa Ana, California.

MAKE GOOD income typing at home! Detailed information $1 (refundable). Ryco Service, Dept. J, 210 Fifth Ave., New York 10.

$400.00 EVERY WEEK Easily. Sell Two Duplicators a day. Print five colors each turn of the crank. Vari-Color, Box M-36, Shawnee, Oklahoma.

EARN $240.00 A Month at home, spare time, doing only two $5.00 Invisible Mending jobs a day. Big money paid for service that makes cuts, tears, disappear from fabrics. Steady demand. Details free. Fabricon, 6256 Broadway, Chicago 40, Ill.

MAKE MONEY Writing Short Paragraphs! No tedious study. I tell you what to write, where and how to sell; and supply list of editors buying from beginners. Many small checks add up quickly. Write to sell, right away. Send for free facts. Benson Barrett, Dept. C-78A-A, 7464 Clark, Chicago 26.

BECOME INDEPENDENT with your own franchise business. Thousands earning handsome incomes. Request interesting facts today. National Franchise Reports, MX-528, 333 North Michigan, Chicago 1.

EASY TO start Rubber Stamp business at home in spare time. Make up to $9.80 an hour without experience. Facts Free. Write Roberts, 1512 Jarvis, Room CR-4-A, Chicago 26.

NEW! PLASTIC Vacuum Forming Machine. Easy. Profitable. Details. D. Burr, 330 East Center, Kalamazoo, Mich.

HIGH EARNINGS sorting coins for us. Chipco, 1228 Victor Ave., Union, N. J.

MONTHLY PUZZLE Contests! Cash prizes! Spence, Box 11569, St. Petersburg, Fla.

• • • PROFITABLE OCCUPATIONS

BAKING — HOME Study: Announcing home study course in commercial baking. Practical basic training. Good field for those with aptitude. Free booklet. "Opportunities in the Baking Industry." National Baking School, 835 Diversey Pkwy., Dept. 2041, Chicago 14, Illinois.

$5,000 FROM HALF Acre growing Ginseng, crop bought. Particulars 10c. Associated Growers, Sperling, Manitoba.

FREE PICTURE Folder, "How to Make $3,000 Yearly, Sparetime, Backyard, Raising Earthworms!" Oakhaven-3, Cedar Hill, Texas.

MAKE MONEY Writing Short Paragraphs. Information Free. Barrett, Dept. C-78B-A, 7464 No. Clark, Chicago 26.

DETECTIVES—MAKE Secret Investigations. Interesting occupation. Write, George Wagoner, 125-J West 86th, New York 24.

SHARPEN-SCISSORS, PINKERS. Inexpensive outfit. Clipper sharpener. Blackhawk, Sheldahl 6, Iowa.

INVESTIGATE AUTO Accidents — Earn $750 to $1,000 monthly. More investigators urgently needed. Car furnished; business expenses paid. No college education necessary. No selling of any kind. Pick your own job locality. Meet interesting, important people. We train you at home in spare time. You keep present job until ready to switch. Write for Free Booklet. No obligation. Liberty School, Dept. 101, Libertyville, Illinois.

VENDING MACHINES—No selling. Operate a route of coin machines and earn amazing profits. 32-page catalog Free! Parkway Machine Corporation, Dept. 16, 715 Ensor St., Baltimore 2, Md.

• • • BARGAINS—WHOLESALE

NEW DELUXE Multicolor wholesale catalog, automobile catalog and others. Nationally advertised merchandise. Housewares, appliances, refrigerators, freezers, washers, dryers, television, radios, rugs, furniture, sewing machines, clothing, luggage, binoculars, phonographs, musical instruments, recorders, cameras, projectors, typewriters, power tools, toys, notions, sporting goods, watches, jewelry, novelties, vitamins, drug sundries, cosmetics, books, school supplies, practically everything. Famous brands. Huge discounts up to 40 to 70%. Postcard: Selbyco, Decatur 7, Illinois.

LARGEST WHOLESALE supply in U. S. Free catalogs. Furniture, clothing, appliances, housewares, automobiles and accessories, farm equipment, tools, hobby supplies, new products, imports. Free details. Associated Wholesalers, Box 2758M-2, Sioux City 4, Iowa.

WORLD'S LARGEST wholesale supply. Buy from 269 American, European, Japanese wholesalers. Tailormade suits from Hongkong. 123 Dropship catalogs. Rock-bottom prices. Free details. International Buyers, 216-MI Jackson, Chicago 6, Illinois.

100,000 PRODUCTS WHOLESALE! Terrific Bargains! United Wholesalers, 1265-X Broadway, New York 1, N. Y.

• • • U. S. GOVERNMENT SURPLUS

JEEPS $278.00, PLANES $159.00, Boats $7.80, Generators $2.68 are typical government surplus sale prices. Buy 10,001 items wholesale, direct. Full details, 627 locations and procedure only $1.00. Surplus, Box 8MI, Thomasville, Penna.

JEEPS—$223.00, TRUCKS—$212.00, Tractors—$68.00, Tools, Guns. Typical Government Surplus Prices. Buy Direct. List Of Depots, Procedure, Full Details Only $1.00. New York Enterprises, Wall Street, Box 402-H12, New York 5.

WORLD'S LOWEST Prices. Free Catalog. Contractors Surplus Company, Williamstown, Mass.

• • • EMPLOYMENT INFORMATION

DIRECTORY REPORTS. Construction, aviation, shipping, oilfields, government, manufacturing, trucking, etc. Foreign-Stateside. Helpful information plus jobgetting tips on preparing application letters. Unconditional money-back guarantee of satisfaction. Act Today. Only $2.00. ($2.25 Airmail) (C.O.D.'s Accepted) Research Services, Meramec Building, St. Louis 5-MI, Missouri.

JAPAN! FAR East! Many hi-paying jobs available now. All types. Complete, detailed reports $2.00. Waits, Box 903, C.P.O., Tokyo.

MI Classified Advertisements

• • • CHEMICALS & SUPPLIES

EXPERIMENTERS: NEW! Bigger Catalog and "Experiments Booklet." Only—25¢. Hagenow Laboratories, Manitowoc, Wisconsin.

CHEMISTRY CATALOG 25¢. Expendibles kit free with $15.00 order. Laboratory Sales, Box 161-C, Brighton, Mass.

232 PAGE CATALOG $2.00. Laboratory Materials, 7319 Vincennes, Chicago, Ill.

• • • FORMULAS, PLANS

FORMULAS, ALL Kinds. Latest. Best. Literature, Stamp. Kemistry, Park Ridge, Illinois.

RESILVER MIRRORS. Formula — $1. D. Dykes, 904 Sunset Drive, St. Joseph, Missouri.

EXCLUSIVE MANUFACTURING Formulas and Processes. List Free. Moon, Martville, N. Y.

FREE FORMULA Catalog. Latest money makers. Western Chemical, Salem, Ore.

• • • OF INTEREST TO WOMEN

CANDLEMAKING & DECORATING. Terrific Hobby, Great Bu$ine$$. Learn fascinating molding, dipping, creating & decorating candles for year-'round demand—holidays, birthdays, weddings, anniversaries, All Events. Spare time fun & extra income now, expand to colorful candle shop later. No age limit. Write for Free Facts on home instruction method. Candle Institute, Dept. X-234, Fallbrook, Calif.

HOME TYPING: $65 week possible! Details, $1. Treasury, 709 Webster, New Rochelle MI-2, N. Y.

• • • TREASURE FINDERS, GEIGER COUNTERS

EXCITING ADVENTURE locating hidden loot, treasure, relics, etc., with powerful, electronic M-Scope locator. Lightweight. Guaranteed. From $59.50. Easy terms. Send for Free booklet, interesting customer reports. Fisher Research, Dept. C-7, Palo Alto, Calif.

TRANSISTOR TREASURE Detectors, underwater detectors. Many models. Free catalog. Gardiner Electronics Co., Dept. 3, 2545 East Indian School, Phoenix, Ariz.

TREASURE LOCATORS. Electronic kit and assembled Models from $39.90. Geiger counters and mineralights. Free. Brochure. Electronic Applications Co., Dept. G, Box 8, Arlington 10, Virginia.

TREASURE! MAP, handbook, 25¢. Locators. Howe, 811C Kansas, Atchison, Kansas.

• • • PRINTING OUTFITS & SUPPLIES

PRINTING OUTFITS, type, supplies. Send dime for illustrated supply book and samples. Kelsey, Inc., H-57, Meriden, Conn.

MAKE YOUR Own self-molding rubber stamps and printing cuts. Plexirubber, Argyle 3, Wisconsin.

RUBBER STAMP Outfits. Supplies. Kiewiet, 2025 Barney Road, Kalamazoo, Michigan.

• • • PRINTING, MULTIGRAPHING, MIMEOGRAPHING

BUSINESS CARDS—Raised letters $3.00 per 1,000. Free samples. Kavanagh, 607 Knickerbocker Ave., Brooklyn 21, N. Y.

COLORED OR White 8½x11 Offset $6.50—1000; $18—5000. Fast! Glaser, 8 West 45 St., New York City 36.

1000 BUSINESS CARDS, "Raised Letters" $3.75 postpaid, Samples. Routh, M-161 2633 Randleman, Greensboro, N. C.

1,000 BUSINESS CARDS, "Raised Letters" $3.95. Samples. Pioneer, MI-1, Island Park, N. Y.

• • • RUBBER STAMPS & MARKING DEVICES

RUBBER STAMPS, Custom, Stock Business Cards, $2.95—1000. Free Catalog, Samples. Alti, Box 1063, Concord, Calif.

3 LINE RUBBER stamp 50¢, catalog 10¢. Fleetline, P. O. Box 364, Hinckley, Ohio.

• • • STAMP COLLECTING

GIGANTIC COLLECTION Free—Includes Triangles—Early United States—Animals—Commemoratives—British Colonies—High Value Pictorials, etc. Complete Collections plus Big Illustrated Magazine all free. Send 5¢ for postage. Gray Stamp Company, Dept. MI, Toronto 5, Can.

FREE! GIANT Bargain Catalog—New Edition listing thousands of bargains including U. S. & B. N. A. stamps, packets, mixtures, albums, accessories and supplies; sent with beautiful approvals. Jamestown Stamp, Dept. E11MI, Jamestown, N. Y.

WEIRD DIAMOND Shape Coffee Stamps —Lovely Flower Triangle! First American big commemorative. Greenland, Idol Dancer, etc. 10¢ with approvals. Capital Stamp Co., Ferrysburg 5, Mich.

500 WORLDWIDE FOR 25¢. Contains U.S.A., Russia, First U.N., Summit Conference, Olympics, Space Satellite—hundreds more! Approvals, illustrated offers included. Horace Gatewood, Winston-Salem, North Carolina.

ALBUM! HUNDREDS of Spaces! Only 10¢. Postpaid! Stampmart, Hartford 1, Connecticut.

225 STAMPS FOR Only 10c! This mammoth value includes Airmails, Pictorials; stamps from strange Countries cataloguing up to 25c each! Also approvals. Mystic Stamp Company, Camden 30, N. Y.

YEMEN FLAG Stamps with Saudi Arabia and Iraq Flags. Also Hospital Stamp. Big multi-colored, unused, scarce stamps. Catalog $1.80, 10¢ with approvals. Ozark Stamps, Spring Lake 5A, Michigan.

FREE! $1.00 WORTH, your choice, from first selection. No strings! Adults only. Rush request now. Philatelics, Dept. VF, New Paltz, N. Y.

"OLD GLORY" In Flaming Colors!!! USA Flag giant beauty from Honduras! Enormous United Nations Mexican Stamp! Plus Strange Gorilla issue, Duke of Windsor' Morocco, lovely Macao Flowers, Wild Buffalo stamp & others, 10¢ with approvals. Sunny Stamps, Apopka 5, Florida.

UNITED STATES commemorative collection containing 33 different—10¢. Approvals. White, 516-M Avenue L, Brooklyn 30, New York.

BEAUTIFUL PICTORIALS from the countries of San Marino, Ceylon, Colombia and Israel high value. 10¢ with approvals. Shasta Stamp Co., Edgewood, California.

STAMP JUNGLE including Zabu, Kookaburra, Koalabear, Kangaroo, Rhinoceros, 10¢. Approvals. Crown Stamp Company, Virgil 303, Ontario.

50 ALL DIFFERENT Stamps Free With Approvals. Wm. Rice, 87 Washington Avenue, Kingston 53, N. Y.

25 DIFFERENT COMMEMORATIVES 1893 up 10¢. U. S. Approvals. K & B, Box 70, Brooklyn 23, N. Y.

25 DIFFERENT LARGE American Commemoratives. 10¢ with approvals. Linstamp, St. Catharines 103, Ontario.

307 WORLDWIDE DIFFERENT Stamps only 25¢. Approvals. Niagara Stamps, St. Catharines 203, Ontario.

U. S. STAMPS. Giant Bargain Catalog—20¢. Raymax, 35YL Maidenlane, NYC 38.

NUDES SET (4)—unusual approvals—10¢. Atlasco, Plainfield, Racine, Wisconsin.

PENNY APPROVALS; Regardless. Catalogue! Kloster, 4164 52nd St., San Diego 5, Calif.

100 STAMPS 10¢ WITH approvals. Smith, 508-D Brooks, College Station, Texas.

100 OLD UNITED States between 1861 and 1935, $1.00. Roush Stamps, 51 Chestnut, Mansfield, Ohio.

14,000 DIFFERENT! AMAZING new plan builds your collection systematically, country by country. Only 50¢ weekly. Free details. L. G. Ware, Stepney 22, Conn.

140 DIFFERENT U. S. commemoratives—$1.00. Continental, Box 1553, Washington 13, D. C.

FREE 50 WORLDWIDE Stamps With Inexpensive Approvals. University Stamps, P. O. Box 95, Tamiami Station, Miami 44, Florida.

FREE! 25 EGYPT, 5¢ handling, approvals. Bellet, MI-W, Hazel Park, Michigan.

GIGANTIC SURPRISE Packet, contains "hundreds"—only 15¢. Approvals accompany. Dressel, Box 128-S, West Englewood, New Jersey.

222 DIFFERENT WORLDWIDE plus 66 different U. S. 25¢. Unmounted Approvals. Casto, Box 357, Dunbar, West Virginia.

1000 DIFFERENT $1.00 (value $20.00) approvals. Jacobsen, Crompond, N. Y.

200 DIFFERENT BELGIUM 50¢—Penny approvals included. Reed, Box 980, Chicago 90, Ill.

103 DIVERSIFIED BRITISH Empire stamps, 10¢. Approvals. Niagara Stamps, St. Catharines 503, Ontario.

FREE—ANY Volume Scott's International Album, Scott's 1961 Catalogues, even Master Global Album Free when you buy our sensational foreign approvals. Bargain Stamps, Redlands, California.

GODS OF Ancient Greece; Croatian Legion; U. S. National Parks; Mother's Day; U. N.; Packets; New Issues; Many others free when purchasing approvals. Stamp Farm, 13-25, Oxford, Wis.

FREE—EVERYTIME you buy our exciting Approvals, you receive Absolutely Free Stamps equalling the entire amount of your purchases. West Coast Stamps, Santa Ana 1, California.

FREE—WHEN Buying Our Exciting Approvals We Give Valuable Packets, For Complete Purchases, Also Scotts Albums, Catalogues, etc. Tru-Value, P. O. Box 2098, Santa Ana 3, Calif.

GIANT TOPICAL Collection: Moonrocket sets, Satellites, Atomic Ship, Boy Scout issues, Complete UN Sets, latest Olympics and Sport issues from Togo, Mongolia, Paraguay, Germany, Romania, etc. Plus Big Stamp Dictionary and Approvals. Everything 10¢! Stampex, Box 47-C1, White Plains, N. Y.

WOW! 110 ALL Different Germany 10¢! Zeppelins, Semi-Postals, Airmails, High values, etc. Giant Catalog, bargain lists included with beautiful approvals. Jamestown Stamp, Dept. A11MI, Jamestown, N. Y.

105 DISSIMILAR BRITISH Colony stamps, 10¢. Approvals. Crown Stamp Company, Virgil 603, Ontario.

FREE! SURPRISE "Mystery" packet with approvals. Dancer, B75-X11, Mansfield, Ohio.

1000 DIFFERENT WORLDWIDE Stamps $1.00. Valued over $20.00. To adults only requesting our Popular Packet Approvals. Universal, Box 6, Kenosha 10, Wisconsin.

107 DISTINCT BRITISH Colonial Stamps. 10¢. Approvals. Linstamp, St. Catharines 403, Ontario.

75 DIFFERENT UNITED States. Obsolete and Current. 25c. Ed. Keller, Library 5, Penna.

300 ALL DIFFERENT 25¢ approvals follow. James Cusick, 5 Cambridge Conimicut, Rhode Island.

• • • COIN COLLECTING

BRILLIANT UNCIRCULATED Mexican Silver Dollar, 50¢ (refundable). Universal Services, Box 866, San Antonio 81, Texas.

TRUNKFUL 25,000 Indian-Lincoln cents mixed (from the 1920's & older). Will pack 'Grab-Bag' style 800 mixed—$50; sample bag of 22—$2. Mrs. Fischer, 5 Centre St., Hempstead 84, N. Y.

FREE BONUS Offer! U. S. bargain list, 10¢ (refundable). Economy Sales Company, Mansfield, Massachusetts.

SIX DIFFERENT Indians $1.00; Free List. Collector's Bargains, Box 356G, New Hope, Pa.

• • • HOBBIES & COLLECTIONS

OLD COLTS, Winchesters, many others, walnut stocks and grips, long list 25¢. Dealers Invited. Want used Colt 38 supers. Laredo Gun Shop, 3110 San Bernardo Ave., Laredo, Texas.

• • • OLD COINS WANTED

WE'LL PAY $9,000.00 to $18,000.00 for 1913 Liberty Head Nickel. Certain Dates — Half Cents — $3,750.00; Large Cents—$5,500.00; Indian Cents—$1,750.00; Flying Eagle Cents—$650.00; Dimes Before 1943—$5,250.00; Quarters Before 1934—$5,250.00; Half Dollars Before 1940—$7,500.00. Certain Silver Dollars—$15,000.00. We paid $6,500.00 for one Silver Dollar. Thousands of others worth $10.00 to $3,000.00 each. Such as, Certain Dates—Lincoln Cents Before 1956, 2¢ Pieces, 3¢ Pieces, Half Dimes, Shield Nickels, Liberty Head Nickels, Buffalo Nickels, 20¢ Pieces, Commemorative Coins, Paper Money, Foreign Coins, etc. Certain Gold Coins worth $40,000.00. Whether your coin is worth $10.00 or $40,000.00, we'll pay the highest price of any dealer advertising a buying Catalogue. We have been leaders of Numismatic Quotations for over Twenty Years and have purchased over $250,000.00 worth of Rare coins. Thousands of persons have sold us coins. For complete Allcoin Information, before sending coins, send $1.00 for finest Large Illustrated Complete Guaranteed Buying-Selling Catalogue. Catalogue Dollar Refundable. Worthycoin Corporation (K-318-C), Boston 8, Massachusetts.

OLD COINS Bought. Illustrated Catalog 25¢. Hutchinson's, Box 4747, Philadelphia 34, Penna.

$500,000,000.00 SEARCH FOR Old Coins. We pay up to: Cents before 1934, $10,000.00; Nickels before 1945, $15,500.00; Dimes before 1946, $5,600.00; Quarters before 1940, $5,100.00; Half-dollars before 1948, $5,200.00; Silver dollars before 1936, $17,500.00; Gold coins, over $30,000.00. Hundreds of different coins worth $10.00 to $35,000.00. Send $1 for new complete buying catalog and premium guide containing illustrations and complete information. Our new 1961 guide, just off the press, lists the Highest Buying Prices Of Any Reputable Coin Dealer. We invite you to compare our high prices with any other catalog, regardless of cost. We have compared and found ours to be the highest. Endwell-Union is proud of its fine reputation and thousands of satisfied customers. We purchased many of the rarest coins to be offered for sale in past years. Do Not Be Misled. Do Not Sell Your Coins For Less Than They Are Worth. Get Endwell-Union's Highest Prices Before You Sell. Send $1 today. A Fortune May Be Awaiting You! $1 refunded when you sell us $10 or more worth of coins. Reliability Absolutely Guaranteed. Endwell-Union Company, Dept. ME-2, Kirkwood, New York.

CASH FOR Coins! Many coins in general circulation bring large premium prices! Send $1.00 for our "Paying Price List"—Direct Mail Service, Box 425-MI, Glendale, California.

• • • EDUCATION & INSTRUCTION

ENGINEERING AND Art Degrees earned through home study. Electronics, Electrical, Mechanical, Civil, Physics, Liberal Arts. When writing specify course desired. Pacific International College of Arts & Sciences, primarily a correspondence school. Resident classes also carried. 5719-F Santa Monica Boulevard, Hollywood 38, California.

LEARN EXPERT Cake Decorating, Candy Making. Free Details to housewives! Candy & Cake, Dept. 840, Fallbrook, California.

WANT A Diesel Job? Higher pay? Advancement? We can help you qualify! Complete Diesel, Tractor and Heavy Equipment and Cummins Diesel Engine Shop-method home-training courses available. Write today. Interstate Training Service, Dept. B-4, Portland 12, Ore.

LEARN AUCTIONEERING. Free catalog! Missouri Auction School, Box 9252N3, Kansas City, Missouri.

GAME WARDEN, Government Hunter, Forestry, Park and wildlife Service announce job openings regularly. Enjoy outdoor work, good pay real security. Complete information Free! Write North American School of Conservation, Dept. 1518, 810 Dodsworth, Covina, Calif.

LEARN WHILE Asleep with your recorder, phonograph or amazing new "Electronic Educator" endless tape recorder. Details free. Research Association, Box 24-MM, Olympia, Washington.

SIGN PAINTING. Fascinating system. Straley, 410-M South Western, Springfield, Ohio.

FREE L.P. Record and book gives instructive facts about sleep—Education and the Audio Educator—the short cut method to learning and self-development—no obligation. SDRF, Dept. I-1, 104 East 40th Street, New York 16, N. Y.

MASTER WATCHMAKING at home. Free sample lesson. Chicago School, 2323-TN Milwaukee, Chicago 47.

ANALYZE HANDWRITING for profit, pleasure, self-understanding. Learn professional system. Write for Free Sample lesson. IGAS, Inc., Dept. 3, Springfield 4, Missouri.

DRAFTING PAYS Big Money . . . leads to top positions in automotive, aeronautical construction — mechanical fields. [illegible] 30 years [illegible] Promoting Inventions. National Service Bureau, 3126 Meramec, St. Louis 18, Mo.

INVENTORS! CONSIDER our offer first before selling or licensing your invention. [illegible] Write [illegible] with 62-year-old school. No classes. Standard high school texts supplied. Single subjects if desired. Credit for subjects already completed. Progress at own speed. Diploma awarded. Information booklet free . . . write today! American School, Dept. X128, Drexel at 58th, Chicago 37.

FINISH HIGH School at home. No classes. Texts furnished. Diploma awarded. If 17 or over and left school, write for Free assignment and catalog. Wayne School of LaSalle Extension University, A Correspondence Institution, Dept. 1493 WC, 417 S. Dearborn, Chicago 5, Ill.

PIANO TUNING Pays. Big money in spare time. Learn at home in 30 days. No musical knowledge necessary. Phonograph, records, tools and instructions furnished. Electronic tuning also taught. Free catalog. Capital Tuning School, 3160 S.W. 16th Court, Ft. Lauderdale, Fla.

HIGH SCHOOL Diploma at home. Licensed teachers. Approved materials. Southern States Academy, Station E-13, Atlanta, Ga.

PHYSICAL THERAPY and massage pays big profits. Learn at home. Free catalogue. National Institute, Desk 2, 159 E. Ontario, Chicago, Ill.

DISCOVER HOW to get a really good job whether now employed or not. For complete confidential information write: H. Winter, 2 Ellsworth, Cambridge 38, Massachusetts.

GOOD PAYING Jobs Open! Operate, repair heavy earth moving equipment! Learn "on the job" operating latest cranes, bulldozers, earth carriers! V. A. Approved. Free Catalog. Write, F. A. Hutch, Greer Technical Institute, Braidwood, Illinois.

OPERATE COLLECTION Agency. "Gold Mine" opportunity. Lifetime business. Be respected. Franklin Credit, Roanoke, Va.

• • • BOOKS, PERIODICALS

BOOKS, FREE General Catalog, 100 pages. Text, vocational, educational, instructional subjects. Millions of volumes, new and used. Bargain prices. Books bought. Est. 1902, Long's College Book Co., Dept. MI, Columbus 1, Ohio.

BOOKHUNTERS! ALL Subjects. Send Wants! Jaher Book Service, 183-M Hazelwood Drive, Westbury, N. Y.

BOOKS ALL Subjects, Catalogs 10¢. Returnable. Myers Books, Marquand, Mo.

BOOK PUBLISHER'S Guide. 1030 So. 32 St., Omaha 5, Nebr. $1.00 P.P.

• • • RADIO & TELEVISION SUPPLIES & INSTRUCTION

EXPERIMENTERS! ELECTRO Mineral Unit sends code many feet with 25 drops of water. Science Demonstrations Unlimited possibilities. Guaranteed." Bonus for circuits submitted. Shoffner's, Box 335, Hamilton, Montana. *$1.50 postpaid.

MI Classified Advertisements

• • • CHEMICALS & SUPPLIES

EXPERIMENTERS: NEW! Bigger Catalog and "Experiments Booklet." Only—25¢. Hagenow Laboratories, Manitowoc, Wisconsin.

CHEMISTRY CATALOG 25¢. Expendibles kit free with $15.00 order. Laboratory Sales, Box 161-C, Brighton, Mass.

232 PAGE CATALOG $2.00. Laboratory Materials, 7319 Vincennes, Chicago, Ill.

• • • FORMULAS, PLANS

FORMULAS, ALL Kinds. Latest. Best. Literature, Stamp. Kemistry, Park Ridge, Illinois.

RESILVER MIRRORS. Formula — $1. D. Dykes, 904 Sunset Drive, St. Joseph, Missouri.

EXCLUSIVE MANUFACTURING Formulas and Processes. List Free. Moon, Martville, N. Y.

FREE FORMULA Catalog. Latest money makers. Western Chemical, Salem, Ore.

• • • OF INTEREST TO WOMEN

CANDLEMAKING & DECORATING. Terrific Hobby, Great Bu$ine$$. Learn fascinating molding, dipping, creating & decorating candles for year-'round demand—holidays, birthdays, weddings, anniversaries, All Events. Spare time fun & extra income now, expand to colorful candle shop later. No age limit. Write for Free Facts on home instruction method. Candle Institute, Dept. X-234, Fallbrook, Calif.

HOME TYPING: $45 week possible! Details, $1. Treasury, 709 Webster, New Rochelle MI-2, N. Y.

• • • TREASURE FINDERS, GEIGER COUNTERS

EXCITING ADVENTURE locating hidden loot, treasure, relics, etc., with powerful, electronic M-Scope locator. Lightweight. Guaranteed. From $59.50. Easy terms. Send for Free booklet, interesting customer reports. Fisher Research, Dept. C-7, Palo Alto, Calif.

TRANSISTOR TREASURE Detectors, underwater detectors. Many models. Free catalog. Gardiner Electronics Co., Dept. 3, 2545 East Indian School, Phoenix, Ariz.

TREASURE LOCATORS. Electronic kit and assembled Models from $39.90. Geiger counters and mineralights. Free. Brochure. Electronic Applications Co., Dept. G, Box 8, Arlington 10, Virginia.

TREASURE! MAP, handbook, 25¢. Locators. Howe, 811C Kansas, Atchison, Kansas.

• • • PRINTING OUTFITS & SUPPLIES

PRINTING OUTFITS, type, supplies. Send dime for illustrated supply book and samples. Kelsey, Inc., H-57, Meriden, Conn.

MAKE YOUR Own self-molding rubber stamps and printing cuts. Plexirubber, Argyle 3, Wisconsin.

RUBBER STAMP Outfits. Supplies. Kiewiet, 2025 Barney Road, Kalamazoo, Michigan.

• • • PRINTING, MULTIGRAPHING, MIMEOGRAPHING

BUSINESS CARDS—Raised letters $3.00 per 1,000. Free samples. Kavanagh, 607 Knickerbocker Ave., Brooklyn 21, N. Y.

COLORED OR White 8½x11 Offset $6.50—1000; $18—5000. Fast! Glaser, 8 West 45 St., New York City 36.

1000 BUSINESS CARDS, "Raised Letters" $3.75 postpaid, Samples. Routh, M-161 2633 Randleman, Greensboro, N. C.

1,000 BUSINESS CARDS, "Raised Letters" $3.95. Samples. Pioneer, MI-1, Island Park, N. Y.

• • • RUBBER STAMPS & MARKING DEVICES

RUBBER STAMPS, Custom, Stock Business Cards, $2.95—1000. Free Catalog, Samples. Alti, Box 1063, Concord, Calif.

3 LINE RUBBER stamp 50¢, catalog 10¢. Fleetline, P. O. Box 364, Hinckley, Ohio.

• • • STAMP COLLECTING

GIGANTIC COLLECTION Free—Includes Triangles—Early United States—Animals—Commemoratives—British Colonies—High Value Pictorials, etc. Complete Collections plus Big Illustrated Magazine all free. Send 5¢ for postage. Gray Stamp Company, Dept. MI, Toronto 5, Can.

FREE! GIANT Bargain Catalog—New Edition listing thousands of bargains including U. S. & B. N. A. stamps, packets, mixtures, albums, accessories and supplies; sent with beautiful approvals. Jamestown Stamp, Dept. E11MI, Jamestown, N. Y.

WEIRD DIAMOND Shape Coffee Stamps —Lovely Flower Triangle! First American big commemorative. Greenland, Idol Dancer, etc. 10¢ with approvals. Capital Stamp Co., Ferrysburg 5, Mich.

500 WORLDWIDE FOR 25¢. Contains U.S.A., Russia, First U.N., Summit Conference, Olympics, Space Satellite—hundreds more! Approvals, illustrated offers included. Horace Gatewood, Winston-Salem, North Carolina.

ALBUM! HUNDREDS of Spaces! Only 10¢. Postpaid! Stampmart, Hartford 1, Connecticut.

225 STAMPS FOR Only 10c! This mammoth value includes Airmails, Pictorials; stamps from strange Countries cataloguing up to 25c each! Also approvals. Mystic Stamp Company, Camden 30, N. Y.

YEMEN FLAG Stamps with Saudi Arabia and Iraq Flags. Also Hospital Stamp. Big multi-colored, unused, scarce stamps. Catalog $1.80, 10¢ with approvals. Ozark Stamps, Spring Lake 5A, Michigan.

FREE! $1.00 WORTH, your choice, from first selection. No strings! Adults only. Rush request now. Philatelics, Dept. VF, New Paltz, N. Y.

"OLD GLORY" In Flaming Colors!!! USA Flag giant beauty from Honduras! Enormous United Nations Mexican Stamp! Plus Strange Gorilla issue, Duke of Windsor' Morocco, lovely Macao Flowers, Wild Buffalo stamp & others, 10¢ with approvals. Sunny Stamps, Apopka 5, Florida.

UNITED STATES commemorative collection containing 33 different—10¢. Approvals. White, 516-M Avenue L, Brooklyn 30, New York.

BEAUTIFUL PICTORIALS from the countries of San Marino, Ceylon, Colombia and Israel high value. 10¢ with approvals. Shasta Stamp Co., Edgewood, California.

STAMP JUNGLE including Zabu, Kookaburra, Koalabear, Kangaroo, Rhinoceros, 10¢. Approvals. Crown Stamp Company, Virgil 303, Ontario.

50 ALL DIFFERENT Stamps Free With Approvals. Wm. Rice, 67 Washington Avenue, Kingston 53, N. Y.

25 DIFFERENT COMMEMORATIVES 1893 up 10¢. U. S. Approvals. K & B, Box 70, Brooklyn 23, N. Y.

25 DIFFERENT LARGE American Commemoratives. 10¢ with approvals. Linstamp, St. Catharines 103, Ontario.

307 WORLDWIDE DIFFERENT Stamps only 25¢. Approvals. Niagara Stamps, St. Catharines 203, Ontario.

U. S. STAMPS. Giant Bargain Catalog—20¢. Raymax, 35VL Maidenlane, NYC 38.

NUDES SET (4)—unusual approvals—10¢. Atlasco, Plainfield, Racine, Wisconsin.

PENNY APPROVALS; Regardless. Catalogue! Kloster, 4164 52nd St., San Diego 5, Calif.

100 STAMPS 10¢ WITH approvals. Smith, 508-D Brooks, College Station, Texas.

100 OLD UNITED States between 1861 and 1935, $1.00. Roush Stamps, 51 Chestnut, Mansfield, Ohio.

14,000 DIFFERENT! AMAZING new plan builds your collection systematically, country by country. Only 50¢ weekly. Free details. L. G. Ware, Stepney 22, Conn.

140 DIFFERENT U. S. commemoratives—$1.00. Continental, Box 1553, Washington 13, D. C.

FREE 50 WORLDWIDE Stamps With Inexpensive Approvals. University Stamps, P. O. Box 95, Tamiami Station, Miami 44, Florida.

FREE! 25 EGYPT, 5¢ handling, approvals. Ballet, MI-W, Hazel Park, Michigan.

GIGANTIC SURPRISE Packet, contains "hundreds"—only 15¢. Approvals accompany. Dresel, Box 128-S, West Englewood, New Jersey.

222 DIFFERENT WORLDWIDE plus 66 different U. S. 25¢. Unmounted Approvals. Casto, Box 357, Dunbar, West Virginia.

1000 DIFFERENT $1.00 (value $20.00) approvals. Jacobsen, Crompond, N. Y.

200 DIFFERENT BELGIUM 50¢—Penny approvals included. Reed, Box 980, Chicago 90, Ill.

103 DIVERSIFIED BRITISH Empire stamps, 10¢. Approvals. Niagara Stamps, St. Catharines 503, Ontario.

FREE—ANY Volume Scott's International Album, Scott's 1961 Catalogues, even Master Global Album Free when you buy our sensational foreign approvals. Bargain Stamps, Redlands, California.

GODS OF Ancient Greece; Croatian Legion; U. S. National Parks; Mother's Day; U. N.; Packets; New Issues; Many others free when purchasing approvals. Stamp Farm, 13-25, Oxford, Wis.

FREE—EVERYTIME you buy our exciting Approvals, you receive Absolutely Free Stamps equalling the entire amount of your purchases. West Coast Stamps, Santa Ana 1, California.

FREE—WHEN Buying Our Exciting Approvals We Give Valuable Packets, For Complete Purchases, Also Scotts Albums, Catalogues, etc. Tru-Value, P. O. Box 2098, Santa Ana 3, Calif.

GIANT TOPICAL Collection: Moonrocket sets, Satellites, Atomic Ship, Boy Scout issues, Complete UN Sets, latest Olympics and Sport issues from Togo, Mongolia, Paraguay, Germany, Romania, etc. Plus Big Stamp Dictionary and Approvals. Everything 10¢! Stampex, Box 47-CI, White Plains, N. Y.

WOW! 110 ALL Different Germany 10¢! Zeppelins, Semi-Postals, Airmails, High values, etc. Giant Catalog, bargain lists included with beautiful approvals. Jamestown Stamp, Dept. A11MI, Jamestown, N. Y.

105 DISSIMILAR BRITISH Colony stamps, 10¢. Approvals. Crown Stamp Company, Virgil 603, Ontario.

FREE! SURPRISE "Mystery" packet with approvals. Dancer, B75-X11, Mansfield, Ohio.

1000 DIFFERENT WORLDWIDE Stamps $1.00. Valued over $20.00. To adults only requesting our Popular Packet Approvals. Universal, Box 6, Kenosha 10, Wisconsin.

107 DISTINCT BRITISH Colonial Stamps. 10¢. Approvals. Linstamp, St. Catharines 403, Ontario.

75 DIFFERENT UNITED States. Obsolete and Current. 25c. Ed. Keller, Library 5, Penna.

300 ALL DIFFERENT 25¢ approvals follow. James Cusick, 5 Cambridge Conimicut, Rhode Island.

• • • COIN COLLECTING

BRILLIANT UNCIRCULATED Mexican Silver Dollar, 50¢ (refundable). Universal Services, Box 866, San Antonio 81, Texas.

TRUNKFUL 25,000 Indian-Lincoln cents mixed (from the 1920's & older). Will pack 'Grab-Bag' style 800 mixed—$50; sample bag of 22—$2. Mrs. Fischer, 5 Centre St., Hempstead 84, N. Y.

FREE BONUS Offer! U. S. bargain list, 10¢ (refundable). Economy Sales Company, Mansfield, Massachusetts.

SIX DIFFERENT Indians $1.00; Free List. Collector's Bargains, Box 356G, New Hope, Pa.

• • • HOBBIES & COLLECTIONS

OLD COLTS, Winchesters, many others, walnut stocks and grips, long list 25¢. Dealers Invited. Want used Colt 38 supers. Laredo Gun Shop, 3110 San Bernardo Ave., Laredo, Texas.

• • • OLD COINS WANTED

WE'LL PAY $9,000.00 to $18,000.00 for 1913 Liberty Head Nickel. Certain Dates — Half Cents — $3,750.00; Large Cents—$5,500.00; Indian Cents—$1,750.00; Flying Eagle Cents—$650.00; Dimes Before 1943—$5,250.00; Quarters Before 1934—$5,250.00; Half Dollars Before 1940—$7,500.00. Certain Silver Dollars—$15,000.00. We paid $6,500.00 for one Silver Dollar. Thousands of others worth $10.00 to $3,000.00 each. Such as, Certain Dates—Lincoln Cents Before 1956, 2¢ Pieces, 3¢ Pieces, Half Dimes, Shield Nickels, Liberty Head Nickels, Buffalo Nickels, 20¢ Pieces, Commemorative Coins, Paper Money, Foreign Coins, etc. Certain Gold Coins worth $40,000.00. Whether your coin is worth $10.00 or $40,000.00, we'll pay the highest price of any dealer advertising a buying Catalogue. We have been leaders of Numismatic Quotations for over Twenty Years and have purchased over $250,000.00 worth of Rare coins. Thousands of persons have sold us coins. For complete Allcoin Information, before sending coins, send $1.00 for finest Large Illustrated Complete Guaranteed Buying-Selling Catalogue. Catalogue Dollar Refundable. Worthycoin Corporation (K-318-C), Boston 8, Massachusetts.

OLD COINS Bought. Illustrated Catalog 25¢. Hutchinson's, Box 4747, Philadelphia 34, Penna.

$500,000,000.00 SEARCH FOR Old Coins. We pay up to: Cents before 1934, $10,000.00; Nickels before 1945, $15,500.00; Dimes before 1946, $5,600.00; Quarters before 1940, $5,100.00; Half-dollars before 1948, $5,200.00; Silver dollars before 1936, $17,500.00; Gold coins, over $30,000.00. Hundreds of different coins worth $10.00 to $35,000.00. Send $1 for new complete buying catalog and premium guide containing illustrations and complete information. Our new 1961 guide, just off the press, lists the Highest Buying Prices Of Any Reputable Coin Dealer. We invite you to compare our high prices with any other catalog, regardless of cost. We have compared and found ours to be the highest. Endwell-Union is proud of its fine reputation and thousands of satisfied customers. We purchased many of the rarest coins to be offered for sale in past years. Do Not Be Misled. Do Not Sell Your Coins For Less Than They Are Worth. Get Endwell-Union's Highest Prices Before You Sell. Send $1 today. A Fortune May Be Awaiting You! $1 refunded when you sell us $10 or more worth of coins. Reliability Absolutely Guaranteed. Endwell-Union Company, Dept. ME-2, Kirkwood, New York.

CASH FOR Coins! Many coins in general circulation bring large premium prices! Send $1.00 for our "Paying Price List"—Direct Mail Service, Box 425-MI, Glendale, California.

• • • EDUCATION & INSTRUCTION

ENGINEERING AND Art Degrees earned through home study. Electronics, Electrical, Mechanical, Civil, Physics, Liberal Arts. When writing specify course desired. Pacific International College of Arts & Sciences, primarily a correspondence school. Resident classes also carried. 5719-F Santa Monica Boulevard, Hollywood 38, California.

LEARN EXPERT Cake Decorating, Candy Making. Free Details to housewives! Candy & Cake, Dept. 840, Fallbrook, California.

WANT A Diesel Job? Higher pay? Advancement? We can help you qualify! Complete Diesel, Tractor and Heavy Equipment and Cummins Diesel Engine Shop-method home-training courses available. Write today. Interstate Training Service, Dept. 8-4, Portland 12, Ore.

LEARN AUCTIONEERING. Free catalog! Missouri Auction School, Box 9252N3, Kansas City, Missouri.

GAME WARDEN, Government Hunter, Forestry, Park and wildlife Service announce job openings regularly. Enjoy outdoor work, good pay real security. Complete information Free! Write North American School of Conservation, Dept. 1518, 810 Dodsworth, Covina, Calif.

LEARN WHILE Asleep with your recorder, phonograph or amazing new "Electronic Educator" endless tape recorder. Details free. Research Association, Box 24-MM, Olympia, Washington.

SIGN PAINTING. Fascinating system. Straley, 410-M South Western, Springfield, Ohio.

FREE L.P. Record and book gives instructive facts about sleep—Education and the Audio Educator—the short cut method to learning and self-development—no obligation. SDRF, Dept. I-1, 104 East 40th Street, New York 16, N. Y.

MASTER WATCHMAKING at home. Free sample lesson. Chicago School, 2328-TN Milwaukee, Chicago 47.

ANALYZE HANDWRITING for profit, pleasure, self-understanding. Learn professional system. Write for Free Sample lesson. IGAS, Inc., Dept. 3, Springfield 4, Missouri.

DRAFTING PAYS Big Money . . . leads to top positions in automotive, aeronautical, construction, mechanical fields.

[illegible] with 62-year-old school. No classes. Standard high school texts supplied. Single subjects if desired. Credit for subjects already completed. Progress at own speed. Diploma awarded. Information booklet free . . . write today! American School, Dept. X128, Drexel at 58th, Chicago 37.

FINISH HIGH School at home. No classes. Texts furnished. Diploma awarded. If 17 or over and left school, write for Free assignment and catalog. Wayne School of LaSalle Extension University, A Correspondence Institution, Dept. 1493 WC, 417 S. Dearborn, Chicago 5, Ill.

PIANO TUNING Pays. Big money in spare time. Learn at home in 30 days. No musical knowledge necessary. Phonograph, records, tools and instructions furnished. Electronic tuning also taught. Free catalog. Capital Tuning School, 3160 S.W. 16th Court, Ft. Lauderdale, Fla.

HIGH SCHOOL Diploma at home. Licensed teachers. Approved materials. Southern States Academy, Station E-13, Atlanta, Ga.

PHYSICAL THERAPY and massage pays big profits. Learn at home. Free catalogue. National Institute, Desk 2, 159 E. Ontario, Chicago, Ill.

DISCOVER HOW to get a really good job whether now employed or not. For complete confidential information write: H. Winter, 2 Ellsworth, Cambridge 38, Massachusetts.

GOOD PAYING Jobs Open! Operate, repair heavy earth moving equipment! Learn "on the job" operating latest cranes, bulldozers, earth carriers! V. A. Approved. Free Catalog. Write, F. A. Hutch, Greer Technical Institute, Braidwood, Illinois.

OPERATE COLLECTION Agency. "Gold Mine" opportunity. Lifetime business. Be respected. Franklin Credit, Roanoke, Va.

• • • BOOKS, PERIODICALS

BOOKS, FREE General Catalog, 100 pages. Text, vocational, educational, instructional subjects. Millions of volumes, new and used. Bargain prices. Books bought. Est. 1902, Long's College Book Co., Dept. MI, Columbus 1, Ohio.

BOOKHUNTERS! ALL Subjects. Send Wants! Jaher Book Service, 183-M Hazelwood Drive, Westbury, N. Y.

BOOKS ALL Subjects, Catalogs 10¢. Returnable. Myers Books, Marquand, Mo.

BOOK PUBLISHER'S Guide. 1030 So. 32 St., Omaha 5, Nebr. $1.00 P.P.

• • • RADIO & TELEVISION SUPPLIES & INSTRUCTION

EXPERIMENTERS! ELECTRO Mineral Unit sends code many feet with 25 drops of water. Science Demonstrations Unlimited possibilities. Guaranteed.* Bonus for circuits submitted. Shoffner's, Box 335, Hamilton, Montana. *$1.50 postpaid.

MI Classified Advertisements

FIX YOUR Own TV. Save 80%! Send for Free Illustrated Chart showing how! We'll include Giant Electronics Catalog. Zalytron, 220-X West 42nd Street, NYC.

HI-FI FROM Japan. Finest imported tuners, amplifiers, recorders, etc. Free catalog. KPJ Sales, Box 1252-G, Studio City, California.

ELECTRONIC SURPRISE Package! 5 pounds assorted parts. $25.00 value. Only $2.98. KPJ Sales. Box 1252-G, Studio City, California.

RECORDERS, COMPONENTS. Free wholesale Catalogue. Carston, 125-U East 88, NYC 28.

• • • ACCIDENT INVESTIGATOR TRAINING

INVESTIGATE ACCIDENTS—Earn $750 to $1,000 monthly. Thousands of airlines, insurance companies, steamship lines urgently need Accident Investigators. Make excellent full time or spare time income. Free book! No obligation. GI Approved. Write: Universal Schools, CM-1, Box 8227, Dallas 5, Texas.

• • • AUTHOR SERVICE

SONGWRITERS PUBLISHING House for amateur songwriters. Songs published and recorded. Free music. Amateur Songwriters, 1075 Boylston Street, Boston, Massachusetts.

• • • MUSICAL INSTRUCTION

SONGS INTO $$$$$$$$$$$$—Share $33 million dollars yearly for New Songwriters, songpoets. Any subject, songs composed, published, promoted by largest firm. Information, appraisal Free. Send Nordyke Music Publishers, 6000 Sunset, Hollywood 28M, Calif.

POEMS WANTED for musical setting and recording. Send poems. Free examination. Crown Music Company, 49-M West 32 Street, New York 1.

SONGWRITERS: RECORDING company wants new songs. Royalty basis. National sales, promotion if selected. No charge for melodies. Send material. Music Makers, Dept. B-70, Box 8344 Melrose, Hollywood, Calif.

POEMS NEEDED Immediately for New Songs and Records. Free Examination and Appraisal. Send Poems: Songcrafters, Acklen Station, Nashville, Tenn.

SONGWRITERS, WITH publisher contacts, want song ideas. Share royalties. No fees. Send poems: Songwriters' Associates, 1650 Broadway, N. Y. 19-A.

SONGPOEMS AND songs wanted! Mail to: Tin Pan Alley, Inc., Box 405, Radio City Station, New York 19, N. Y.

POEMS WANTED for musical setting and recording by America's Largest Song Studio. Send poems. Free examination. Five Star Music Masters, 629 Beacon Building, Boston.

SONGWRITERS: OUR writers are getting their songs published. Free brochure. National Songwriter's Guild, Box 1987E, Ormond Beach, Florida.

HAVE MUSIC. Will pay for lyric. This is genuine. Need words badly right now. For particulars mail 25¢. Jay, 83 St. Germain, Toronto 12, Canada.

SONGWRITERS—OUTSTANDING, ethical offer free. Hibbeler, C-32, 6808 Oleander, Chicago 31.

• • • MUSICAL INSTRUMENTS

ACCORDIONS! DIRECT from Importer—savings to 50%. Free home trial. Trades accepted. Easiest terms. Famous makes. Free 1961 catalog. Accordion Corporation, Dept. MX, 2003 Chicago, Chicago 22.

ELECTRIC GUITARS, amplifiers, wholesale, free catalog. Carvin MI, Covina, Calif.

GUITAR MAKING. Books, Plans, Imported Woods, Tools, list 10¢. Rosewood 510 East 11th Street, New York 9, N. Y.

• • • CARTOONING

"HOW TO Make Money With Simple Cartoons"—A book everyone who likes to draw should have. It is free; no obligation. Simply address Cartoonists' Exchange, Dept. 351, Pleasant Hill, Ohio.

CARTOONERAMA TEACHES you cartooning in a new 24 lesson course. Free brochure and details. Write to CFA, Box 263R, Branford, Connecticut.

• • • MAGIC TRICKS, JOKES, PUZZLES

500 TRICKS—LATEST Edition Douglas 120-page catalog now available. Complete catalog—magic tricks and equipment—just 10¢. World's fastest service. Douglas Magicland, Dept. A, Dallas, Texas.

WORLD'S FINEST professional magic. Joker novelties. Giant illustrated catalog 10¢. Top Hat, Evanston 14, Ill.

PROFESSIONAL CATALOG, 175 pages, 25¢. Williams, 900 Plymouth, Ellwood City, Penna.

HAVE FUN with 1000 Tricks, Jokes, Magic! World's greatest! Big exciting catalog! 160 Pages Thick! Rush 10¢, House of 1000 Mysteries, Dept. XI-61, Trumbull, Conn.

FREE TRICK and Magic Catalog 25¢. Castle Magic, Box 92-MI, Jamaica 35, New York.

• • • HYPNOTISM

HYPNOTIZE SUCCESSFULLY! "One Word," "Instantaneous," "Against Will" methods exposed! Complete illustrated course—including "Secret Nerve Pressure Technique" $1.00. H. Fowler, Box 4399, Woodbury, New Jersey.

FREE ILLUSTRATED Hypnotism, Self-hypnosis catalogue. Write: Hypnotist, 8721 Sunset Blvd., Hollywood 46M, Calif.

HYPNOTIZE SELF. Others while asleep with amazing hypnotic phonograph records, tapes. Catalog free. Research Association, Box 24-M, Olympia, Washington.

HYPNOTISM, SELFHYPNOSIS. Guaranteed home study courses. Diploma issued. Free brochure. School Hypnology, 135H Central Park West, New York 23, N. Y.

FREE HYPNOTISM, Self-Hypnosis, Sleep-Learning Catalog! Tapes, Records, Books, Courses, Equipment! Drawer, MI-697, Ruidoso, New Mexico.

NEW CONCEPT of self-hypnosis! Learn quickly, easily! New book, new tape, new record! Free literature. MacKinley Co., Box 3038, San Bernardino, Calif.

"HYPNOTIZE . . . ONE Word . . . One Fingersnap," on stage. Satisfaction—or refund. $2. Hypnomaster, Box 9309-H9, Chicago 90.

WORLD'S LARGEST catalog free. Merlin Enterprises, 1244M Lincoln Ave., San Jose, Calif.

• • • VENTRILOQUISM

VENTRILOQUISM: HANDY 32 page pocket size instruction volume only 15¢ today. Davis, Box 38, Safety Harbor, Florida.

LEARN VENTRILOQUISM easiest method. Details free. Dept. 250, Smith, 2125 North Bigelow, Peoria, Ill.

• • • GAMES, ENTERTAINMENTS, AMUSEMENTS

FRESH IDEAS In Toys. Leading toy manufacturer, with national distribution and network TV show, seeks unique toy ideas. Interested in pure toy only, whose end is to amuse and fascinate child. Not interested in craft-type items whose end goal is completion. Royalty and per item arrangements. Write for submission forms. Colorforms, New Products Division, Norwood, N. J.

• • • DETECTIVES

DETECTIVES, UNDERCOVER Operators, Security Officers—we train. Free information. Write AMCAD, Dept. C, 1951 Galt Street, Simi, California.

DETECTIVE PROFESSION. Home Study. Badge, Certificate, Future. Box 41197-M, Los Angeles 41, California.

DETECTIVES—WORK home-travel. Experience unnecessary. Detective Particulars free. Write, George Wagoner, J-125 West 86th, New York 24.

DETECTIVE COURSE. Credentials, Diploma, Free information. Southwestern Institute Criminology, 510 Iowa, Geronimo, Oklahoma.

DETECTIVE TRAINING. Phillips Secret Service System. 1917-G North Kenneth, Chicago 39, Ill.

• • • CAMERAS & PHOTO SUPPLIES

164 PAGE PHOTOGRAPHIC Bargain Catalog, listing thousands of photographic bargains. Send 25¢ for your copy, credited on first order. Dept. 3-CI, Central Camera Company, 230 So. Wabash Ave., Chicago 4, Illinois.

PHOTOGRAPHY FOR Pleasure Or Profit. Learn at home. Practical basic training. Long established school. Free booklet. American School of Photography, 835 Diversey Parkway, Dept. 2041, Chicago 14, Illinois.

USED 16MM Sound Projectors, also sound films, rental, sale, exchange. Write for free catalog. National Cinema, 71 Dey St., N.Y.C.

• • • DEVELOPING, PRINTING & FINISHING

ROLL DEVELOPED 5x7 Prints 8, $1.00; 12, $1.40; 4x6 or 4x4 Prints 8, 50¢; 12, 70¢. Hagner, 1318 West Columbia, Phila. 22, Pa., Dept. MI.

• • • MOTION PICTURES & SOUND EQUIPMENT

TAPE RECORDERS, HI-FI components, Sleep Learning Equipment, etc, tapes. Unusual values. Free catalog. Dressner, 69-02L 174th Street, Flushing 65, N. Y.

FREE EVERY Month—Blackhawk's newspaper-size catalog 8mm., 16mm. movies, 2"x2" color slides. Biggest selection in USA. Bargains in used 16mm. sound films, projectors. Blackhawk Films, Davenport 16, Iowa.

5,000 8MM.-16MM. SILENT-SOUND Films. Discounts. International-I, Greenvale, L. I., N. Y.

• • • HOME MOVIES

8MM-16MM COLOR and B&W film and supplies. Save $$$$$. Free Catalog. Superior, 442-446 N. Wells, Chicago 10.

MOVIE FILM! Free catalog! ESO-L, 47th Holly, Kansas City 12, Mo.

• • • AUTOMOBILES & MIDGET CARS

NON-PROFIT ORGANIZATION offers automobile literature—old, modern, foreign; dealer books, service manuals, glossy photographs; motor magazines. Write immediately, get free information. Auto Maniacs I, Box 451, Mt. Clemens, Mich.

BUILD THE fabulous half-scale 2-passenger 1901 Merry Runabout. Plans, $3.00. Greg-San Klassic Kars, (MI) P. O. Box 651, Glendale 5, California.

• • • AUTO SUPPLIES & EQUIPMENT

JUST OUT! New 404-page, illustrated Catalog offering savings up to 50% on over 100,000 auto parts and accessories, many hard to get. All makes (1920 to 1961 models), trucks, foreign and sports cars. Also Hollywood accessories, custom styling, Hi-Speed Equipment. Send 25¢ for postage, packing—refundable on first order. Whitney, 1919 MI-1 Archer, Chicago 16, Ill.

HYDRAULIC JACK repair kits—free catalog—free "silent-salesmen" with each kit. Hydraulic Jack Packing & Tool Co., P. O. Box 50, Bloomfield, N. J.

"RING-VALVE JOB" while-U-drive, $6.00 postpaid. Guaranteed!! Nothing like it! Lasts 100,000 miles. Motaloy, Grantham 2, Penna.

BUY WHOLESALE, Automobile Accessories-Merchandise. Catalog 25¢. Worldwide (12-D7), New York City 60.

FORD OWNERS, end rear shock absorber breakage problem with the new Perma-Mount bolt on replacement bracket; no welding, guaranteed life of car. Each $6.50 Pair $12.95. Send Check or M.O. to Rockles Inc., 540 Main Street, Dept. I, West Haven, Conn.

BUILD YOUR Pickup Camper. Blueprints and supplies. Literature 10¢. Comstock Trailers, Parsons, Kansas.

• • • MOTORCYCLES, BICYCLES MOTOR SCOOTERS

GO CART, less engine $30. Eschelman $55. Servicycle $25, Harley $45. Whizzer $38. Engines $4.50 up. (Mailorder Only.) Send 25¢, (35¢ for First Class Mailing) for Directory-Catalogue Number 99, listing these and hundreds of other bargains in midget cars, motorscooters, homebuilders, parts, plans, etc. Midget Motors Directory, Athens, Ohio.

RECONDITIONED MOTORCYCLE Motors. Chrome accessories. Complete stock Indian parts. Expert rebuilding. Fast service. Indian Motorcycle Sales, Kansas City 27, Missouri.

HARLEY-DAVIDSONS — USED Bargains. New, used parts, accessories, all models. Bulletin 25¢. Knuth's (Factory Dealer) 2491 Fondulac, Milwaukee, Wisc.

• • • AVIATION

HELICOPTERS ARE our business, not our sideline. A-W originators of homebuilt helicopters (not autogyros) sells more kits, plans than all others combined. Learn why! Booklet with 3-view drawings, complete prices, regulations, specifications, photos sent postpaid, 25¢. Adams-Wilson Helicopters, Lakewood 16, California.

PROPELLERS, PLANS, supplies for airboats and snowplanes. Catalog 25¢. Banks-Maxwell, Box 3301D, Ft. Worth 5, Texas.

• • • JET PROPULSION & ROCKETS

ROCKET MODEL kits, parts, chemicals. Catalog, plans 25¢. Central Rocket Company, Box 890, Waupaca, Wis.

UNDERWATER FUSE. 10 feet, $2.00. Special Services, 7036 Risingsun Avenue, Phila. 11, Penna.

• • • ENGINES, MOTORS

"POWER DRIVES Handbooks"—36 pages illustrating many types motor drives for model autos, boats, displays, turntables, etc. Mail 25¢ cash, returnable first order $3.00 or more. Wilson's of Cleveland, Dept. MI, P. O. Box 8995, Ft. Lauderdale, Fla.

DIESEL INJECTOR parts and fuel pumps wanted. GM51-53-71-110. Packard, 7120 Carnegie, Cleveland 3, Ohio.

• • • ELECTRICITY & ELECTRICAL SUPPLIES

LAMP—APPLIANCE parts wholesale. Illustrated distributors catalogue 25¢. Seco, 26 South 20th Street, Birmingham 3, Alabama.

• • • MACHINERY, TOOLS & SUPPLIES

REDUCE MACHINE Tool Reconditioning Costs. Details. Machine Tool Publications, 215-M Commerce Bldg., St. Paul 1, Minn.

ELECTRO-SCRIBE: ENGRAVES All Metals, $2.00. Beyer Mfg., 10511-G Springfield, Chicago 55.

• • • WELDING, PLATING & SOLDERING

WELDERS, 110/220, WELDS ½", $39.50. Morris, 1070 Inner Drive, Schenectady 3, N. Y.

• • • INVENTIONS WANTED

INVENTORS' COMPLETE Service. Cash-Royalties Sales. Inventions Researched. Patent Development Engineering. Free Invention Certificate. George Spector, Licensed Invention Engineer, 3615 Woolworth Building, New York.

INVENTORS: IF you have an invention for sale write for free brochure outlining manufacturers' requirements, royalty rates. Kessler Corporation, C-61-IW, Fremont, Ohio.

INVENTORS: HUNDREDS of manufacturers have requested our assistance in locating marketable new products. Complete information, free. Institute of American Inventors, Dept. 50-C, 635 F Street N. W., Washington 4, D. C.

INVENTIONS WANTED. All types. Tremendous manufacturers lists. Global Marketing Service, 2420 77th, Oakland 5, Calif.

INVENTIONS WANTED for immediate promotion! Outright Cash; Royalties! Casco, Mills Building, Washington 6, D. C.

INVENTIONS WANTED: "Patented"—"Patent Pending." 30 years experience Promoting Inventions. National Service Bureau, 3126 Meramec, St. Louis 18, Mo.

INVENTORS! CONSIDER our offer first before selling or licensing your invention on a cash or royalty basis. Write: Inventions on Demand, 79 Wall Street, New York 5, N. Y.

INVENTIONS WANTED now by my manufacturer clients. Write Gilbert Adams, Patent Broker, 80 Wall St., Financial District, New York City.

INVENTORS! OUTRIGHT cash sale or royalties for your inventions. Constant demand from our client manufacturers. Write United States Invention Brokerage, 78 Wall Street, New York 5, N. Y.

WE MARKET worthwhile inventions and ideas. Harvey Consultants, Cambridge, Md.

• • • FOR INVENTORS

INVENTORS: SAVE time and money. Our complete "Patent Kit" makes it easy to prepare and file your own patent application. Free "Registration Certificate." National Inventors Service, Box 88, Benjamin Frank. Station, Washington, D. C.

INVENTORS: NEED Help? Write Institute of American Inventors, Dept. 50-T, 635 F St., N. W., Washington 4, D. C.

INVENTIONS NEEDED immediately for manufacturers. For additional information write Kessler Corporation, C-61-FI, Fremont, Ohio.

INVENTION PROTECTION Form and "Patent Information Every Inventor Needs" sent free. Inventors, attorneys, manufacturers use my complete services. Miss Joan Haywood, Patent Searcher, 1029 Vermont Avenue, N. W., Washington 5, D. C.

YOU CAN easily apply for patents. Save high costs with complete professional kit, featuring our exclusive "Demonstrator Method." Free Registration Certificate. Patent Associates, 1212, Commonwealth Building, Philadelphia 7, Pennsylvania.

PATENT SEARCHES, complete with comprehensive report and Official Patent Office copies of related patents. Certified, Airmailed. Inventors Complete Service. For free "Protection Form" and "Patent Information," write: U. S. Inventors Service Bureau, Headquarters Building, Washington 6, D. C.

COMPLETE PATENT and Trademark services. Searches expertly administered; comprehensive reports. Free "Record Forms"; write: Congress Invention Institute, 210F McKim Building, Washington 5, D. C.

INVENTIONS WANTED now by my manufacturer clients. Write Gilbert Adams, Patent Broker, 80 Wall St., Financial District, New York City.

INVENTORS' COMPLETE Service. Cash-Royalties Sales. Inventions Researched. Patent Development Engineering. Free Invention Certificate. George Spector, Licensed Invention Engineer, 3615 Woolworth Building, New York.

MI Classified Advertisements

SAVE HIGH Fees! New Patent Kit now makes it easy for you to apply for your Patent. Free "Registration Form." Miss Susan Blane, 306 Carry Building, Washington 5, D. C.

WE HAVE markets if you have ideas. Harvey Consultants, Cambridge 1, Md.

INVENTORS! OUTRIGHT cash sale or royalties for your inventions. Constant demand from our client manufacturers. Write United States Invention Brokerage, 78 Wall Street, New York 5, N. Y.

PROFESSIONAL SEARCHES of the Patent Office Records. Dependable—Reliable—For free protection forms write Trans-World Patent Service, 500 Walker Bldg., Washington 5, D. C.

PATENT SEARCHES including copies of closest patents. Quality searches, expertly administered. Free protection Forms. Write Professional Patent Office Search Bureau, 709 Albee Building, Washington 5, D. C.

DON'T PAY High Fees! Obtain U.S. Patent yourself. It's easy with "Professional Kit with Fill-In Forms." Free "Registration Form." Patent Protection Institute, 2000 P. Street, N.W., Washington 1, D. C.

INVENTORS! CONSIDER our offer first before selling or licensing your invention on a cash or royalty basis. Write: Inventions on Demand, 79 Wall Street, New York 5, N. Y.

INVENTIONS WANTED for immediate promotional Outright Cash; Royalties! Casco, Mills Building, Washington 6, D. C.

• • • HOME CRAFTSMEN

LEARN JEWELRY Making at home. Inexpensive Art Metalcraft course teaches how to make all types cuff links, earrings, tableware, etc., of silver, gold, copper. Send postcard for free booklet. Interstate Training Service, Dept. L-4, Portland 12, Oregon.

BUY PICTURE Frame moldings at wholesale. Actually less than cost of raw lumber. All styles and widths. Free Delivery. Write for price list. Chesapeake Picture Frame Makers, 414 E. Baltimore Street, Baltimore 2, Md.

FREE "DO-IT-YOURSELF" Leathercraft Catalog. Tandy Leather Company, Box 791-Z38, Fort Worth, Texas.

FREE. NEW Catalog. 2447 Plans, Patterns. World's greatest selection things to Do, Make. Fun. Profit. Craftplans, 1322-K Wabash, Chicago 5.

101 PATTERNS OF Smart Gifts, Novelties, Shelves, Action windmills plus "Make Money Jig Sawing." $1.00. Mastercraft, JSX, 7041 Olcott, Chicago 31.

!!FREE!! BIG 64 page Leathercraft catalog. Hundreds of new items. Write MacPherson Bros. Leather Company, Dept. M, 730 Mission St., San Francisco 3, Calif.

SELL ALUMINUM awnings, siding wholesale. Write Dana, P. O. Box 10446, Tampa, Florida.

SANTA SLEIGH Reindeer 56x80. Santa Pack 40x28 $2.25. Strother, Belington, W. Va.

• • • MODELS, MODEL SUPPLIES & ELECTRIC TRAINS

SAVE! FREE Bargain Bulletins: Trains, Airplanes, Boats, Cars, Radio Control, Plastics. America's Hobby Center, 146MI West 22nd Street, New York 11, N. Y.

LIONEL TRAINS big discounts bulletin 10¢, catalog 25¢. Mack Bros., 2041-M Chicago Ave., Chicago 22.

SCALE MODEL materials for building model homes and architectural buildings of any type. 1/4" and 1/8" scale. Send 35¢ for catalog. A & B Model Builders, 454-K Donovan Road, Kansas City, Kansas.

SHIP MODELS. Most complete line in New England. Kits, fittings, plans, books, tools, engines, motors. Illustrated catalog 35¢. James Bliss & Co., Inc., Dept. MI, 342 Atlantic Ave., Boston 10, Mass.

SHIP MODEL kits and fittings: clippers, frigates, etc. Catalog, paint-tool list, book list, 25¢. Model Shipways, Bogota, N. J.

• • • PLASTICS

NEW LIQUID Casting Plastic, clear, colors. Embed real flowers, butterflies, photos, coins. Send 25¢ for two handbooks "How to Cast Liquid Plastics" and "How to Make Extra Money at Home." Castolite, Dept. A-104, Woodstock, Illinois.

MAKE YOUR own plastic jewelry castings and embeddings. Introductory jewelry kit $3.95 or send 25¢ for catalog. Castacraft Corp., Dept. I-1, Box 555, Palo Alto, Calif.

CLEAR AND Colored Plexiglas Sheets Clear Acrylic Rods and Tubes McClarin Plastics, Box 168-X, Hanover, Pennsylvania.

• • • FOR SPORTSMEN

SEND ME your name and I'll tell you about a method that lets you take giant bass out of waters that other folks say are "fished out." Facts free. Write Eric W. Fare, Highland Park 37, Illinois.

• • • SPORTING GOODS

FREE — WHOLESALE Catalog. Beads, Spinners. Lure parts. Sinker molds. Jigs. Reels. Finnysports (R.D.), Toledo 14, Ohio.

5000 GUNS, SWORDS, War Relics. Catalog 50¢. Smith Armory, Runnemede, N. J.

• • • BOATS, OUTBOARD MOTORS

FULL SIZE, cut-to-shape boat patterns, blueprints, 7½-38 feet. Big new 88-pg. illustrated "Build a Boat" catalog of Naval Architect-designed Catamarans, Cruisers, Runabouts, Skiffs, Outboard Boats, Sailing, Racing, Houseboats, 50¢. "How to Build a Boat" booklet, $2.50, Equipment Catalog, $2.00. Cleveland Boat Blueprint Co., Dept. A-23, Box 1651, Cleveland, Ohio.

MARINE CONVERSIONS. Ford, Chevrolet V8, Jeep engines. Catalog 25¢. Lehman Manufacturing Company, 800 Elizabeth Ave., Linden 3, N. J.

SAVE! SAVE! Save! World's Finest Boat Kits—25% less! Satisfaction Guaranteed! Write for free color catalog. Dept. MIM-161, Taft Marine Woodcraft, 636 39th Ave. N.E., Minneapolis, Minnesota.

NEW, USED rebuilt marine motors. Marine conversions, fittings. Free catalog. Stokes Marine Supply, Dept. 21, Coldwater, Mich.

FRAME KITS, Plans or full-size Patterns for 35 Inboards and Outboards. Prepared for Amateur Builders. New 80 page illustrative catalog—50¢. Designs, 9152 Rosecrans, Bellflower, Calif.

300 BOAT PLANS, some kits. Catalogs; Powerboat $1.00, Sailboat 25¢. Trailer Kits. Marinecraft, Box 161-X, Brighton, Mass.

• • • BINOCULARS, TELESCOPES, MICROSCOPES

WAR SURPLUS Bargains: Millions of lenses, instruments, telescopes, binoculars, components and complete line of astronomical telescope items. World's greatest optical market-place! Send only $1.00 for beginner's 10-lens Kit and big Instruction Booklet Stock 2-CB. Write for Catalog "CB" Free! Edmund Scientific Co., Barrington, New Jersey.

TRIPOD PLANS. Unless you have a sturdy support for your telescope it will be virtually useless for good observing. For best results build MI's "Quarter-Ton" Tripod. Send 75c for plans and instructions to MI Reader Plan Service, Fawcett Place, Greenwich, Conn. Please ask for Plan No. P-7.

BUILD YOUR Own Reflector Telescopes! Complete Kits: Mirrors, Eyepieces, Tripods, All Other Accessories. Request Free Illustrated Literature. Criterion Manufacturing, Dept. DM-71, Hartford 1, Conn.

TELESCOPE KITS direct from manufacturer. Other optical hobby kits. Large selection. Free booklet. Esco Products, Oakridge, N. J.

REFLECTING TELESCOPES, 60X completely assembled. Guaranteed observatory clearness. Free information. Skyscope, P.O. Box 55, Brooklyn 28, New York.

TELESCOPES, BINOCULARS, microscopes—all sizes. Free Catalog. Suffolk Science, Mattituck, New York.

MAKE REFLECTING Telescopes. Send 10¢ for complete instructions and price list. Precision Optical, 1001 East 163 St., New York 59, N. Y.

DYNASCOPE—AMAZING World-Famous Reflector Telescope. Request Free Brochure. Criterion, Dept. DM-89, Hartford 1, Conn.

• • • BODY BUILDING—ATHLETIC EQUIPMENT

KARATE! JUDO! Musclebuilding! Yoga! Boxing! Stunts! 125 individual, illustrated lessons . . . all $1.00. Charts, Diagrams, Secrets. Absolutely complete. Sanson Institute, 44W Bromfield, Boston 8, Mass.

BARBELL COURSE, thoroughly explained, illustrated $1.00. Catalogue 10¢. Good Barbell, Siloam Springs, Ark.

"BIG MUSCLES. The Quick Way." Dr. Young's revolutionary discovery. Free information. Gaucho, Box 9309-59, Chicago 90.

FREE MUSCLE building information. Bodytone, Box 638-C, North Miami, Fla.

• • • RABBITS—HAMSTERS

RAISE RABBITS Successfully by knowing Facts. 48 Page Book, 38 Illustrations describing 25 Breeds. Housing. Breeding. Feeding. Markets and Marketing. Bulletin, etc., 25 cents. American Rabbit Association 83, Arba Building, Pittsburgh, Pa.

RAISE RABBITS on $500 month plan. Free details. White's Rabbitry, Mt. Vernon, Ohio.

• • • REAL ESTATE, FARM LANDS

FLORIDA HOMESITES (high and dry) near National Forest $345 at $10 monthly. Folder Free. Winston Vernor, DeLand, Florida.

CANADIAN TAX Sale Property: $5.00 acre. Terms $10.00 month. Fishing, Hunting, Investment, Vacationing, Timber, Minerals. Free information. Land Corporation, 3768-E Bathurst, Downsview, Ontario, Canada.

• • • HORSE TRAINING

"HOW TO Train Horses"—A book everyone who likes horses or ponies should have. Free. No obligation. Simply address Beery School, Dept. 1151, Pleasant Hill, Ohio.

• • • PETS FOR SALE

REGISTERED GERMAN Shepherd Rin Tin Tin Puppies shipped anywhere. George Gober, Jacksonville, Texas.

• • • PERSONAL

BORROW $100 TO $600 By Mail. Quick, Easy, Private. No Co-Signers. Repay in 24 small monthly payments. For the amount you want write today to Dial Finance Co., 410 Kilpatrick Bldg., Dept. A-1, Omaha 2, Nebraska.

"RULE OTHERS with thoughts." (Telepathy.) Write: Clarion, Box 9309-S9, Chicago 90.

LOANS BY Mail. $50 to $600 For Any Purpose. Confidential. 2 years to repay. Write for free loan application. American Loan Plan, City National Bldg., Dept. M-12200, Omaha 2, Nebraska.

MEXICAN LAW. Attorney Caniceros, Apto 79.—C. Juárez, Chih, Mex.

• • • JEWELRY

COSTUME JEWELRY Supplies, Settings, Rhinestone, etc. 88 page illustrated catalog. 30¢. Milady, Box 1328, G.P.O., N.Y.C.

NEW MONEYMAKING Costume and Shell Jewelry Designs, Instructions and Supply Catalog, 25¢. Modern Craft, Box 11088-X1, Saint Petersburg 33, Florida.

• • • MINERALS, PRECIOUS STONES

GET FREE Catalog no serious rockhound, gem cutter, jewelry maker, hobbyist or craftsman can be without. Full of bargains, exclusive items, low prices from largest suppliers and authorities in the field. Free . . . new catalog just off the press—yours for the asking! Write Grieger's, Dept. C-3, 1633 E. Walnut, Pasadena, California.

• • • MISCELLANEOUS

NEED WORLDS Of Help? Borrow up to $600 for any purpose entirely by mail. Repay in 24 monthly payments. Write for free loan application: World Finance Co., 620 Symes Bldg., Dept. 120-T, Denver 2, Colo.

FREE WHOLESALE Catalogs! 250,000 Products . . . Tremendous Discounts! Econ-O-Mart, Whippany 8, N. J.

"WINEMAKING," "BEER, Ale Brewing." Illustrated. $2.20. Eaton Bookstore, Box 1242-Z, Santa Rosa, California.

"BEER BREWING Simplified," Illustrated. $1.00. Murray, 2423 W-164 St., Gardena, Calif.

RARE, FANCY, Ornamental Chicks. Bantams, Ducklings, Goslings, Guineas, Turkeys, Capons. Free Catalog. Stromberg's, Fort Dodge 58, Iowa.

LOANS ENTIRELY By Mail—$600 Or Less. Repay in 24 monthly payments. Write: Budget Finance Co., Dept. H-120, 114 S. 17, Omaha 2, Nebr.

MAKE YOUR Own Beer, 5¢ quart, complete illustrated instructions, $2.00. CalBrew Supplies, 1225 Luzern, Seaside, Calif.

BEAUTIFUL CRESTED Malkin Ducks. Pair $25.00. Meadowbrook, Richfield 35, Pa.

• • • OLD GOLD WANTED

HIGHEST CASH Paid For Old Gold, Jewelry, Gold Teeth, Diamonds, Watches, Silver. Mail Articles Today. Information Free. Chicago Gold & Precious Metals, 6 E. Monroe, Dept. 2456 Chicago 3.

HIGHEST CASH For Old Gold, Jewelry. Gold Teeth, Watches, Diamonds, Silverware, Spectacles, Platinum, Mercury. Free information. Rose Refiners, Heyworth Bldg., Chicago 2.

• • • WATCHES, WATCHMAKING, CLOCKS

WATCH AND clock repairing books. Free catalog. North American, 2320-CA Milwaukee, Chicago 47, Ill.

USED AND new watches $2 up. Free List. Southern Watches, 5-M South Wabash, Chicago 3, Ill.

CUT IT OUT!

DO IT NOW!

OKAY, I DID IT! Here's my coupon. Now it's your turn. Enter my subscription right away and make sure that I never miss an issue of MECHANIX ILLUSTRATED!

I prefer: ☐ **ONE YEAR $3*** ☐ **TWO YEARS $5***
(*In U.S., possessions & Canada. Elsewhere $6 per year.)

☐ **Payment enclosed** ☐ **Bill me later** ☐ **New order** ☐ **Re-order**

NAME .....

ADDRESS .....

CITY ..... **ZONE** ..... **STATE** .....

Mail to:
MECHANIX ILLUSTRATED Subscription Dept., Fawcett Bldg., Greenwich, Conn.

NOBODY KNOWS THE INS AND OUTS OF FUNCTIONAL STYLING LIKE CHEVY!

Easier to get in and out
Easier to get your baggage in and out
Easier to get in and out of parking places

It's as easy as slipping into the driver's seat to see that this new '61 Chevy has got people sized up in beautiful style. For this is one car that makes beauty make sense—from its slimmer, trimmer out size to a remarkably roomy in size. Larger door openings—as much as 6 inches wider—are an open invitation to get in and be on your way. Entrance height is up, too—as much as nearly 2 inches in hardtops. And there's more front seat leg room, more foot room in the rear and generous head room (up to 2 inches more in the sport coupe). Seats—as right for sitting as they are for seeing—are up to 14% higher.

These sensible new dimensions even reach right back to the easier loading new deep-well trunk that lets you pile baggage 15% higher. Packing it is child's play with the loading height dropped as much as 10½ inches down to bumper level. And to wrap it up, that slimmer outside design makes for easier handling, parking and garaging. But really, the best way to see how this '61 Chevy fits your style is to try it on for size at your Chevrolet dealer's. . . . Chevrolet Division of General Motors, Detroit 2, Michigan.

CHEVROLET

MAIL FOR McCAHILL

UNCLE TOM ANSWERS HIS MOST INTERESTING LETTERS IN THIS COLUMN. WRITE TO HIM AT *MECHANIX ILLUSTRATED*, 67 WEST 44TH ST., NEW YORK 36, N. Y.

● *On a trip to California recently I ruined the battery in my car by driving across the hot desert without any water in it. I bought a chain store replacement which lasted until I got home but now it's starting to pooh out and I'm faced with buying a third battery in order to get through this winter. Should I buy another "bargain" or dig deep for an expensive box of lead?*

Arthur L. Roper
Philadelphia, Pa.

Though original equipment batteries are usually a few notches higher, quality-wise, than original equipment tires, generally you get what you pay for, with one or two possible exceptions. Any car that is to be stored in a frigid garage or outdoors during the winter needs a battery with a lot of moxie. When buying a replacement battery, you should be guided by how long you intend to keep the car. If you are planning on several years, then buy the best; it will not only save you money but a lot of frustration, too.

● *With the country's population growing at an alarming rate, I was wondering if they counted you and McMichael as four in the recent census. After all, you're both big enough.*

Ken Hulbert
New Orleans, La.

It may come as a surprise to you, Ken, but I sincerely question the accuracy of the Official Census. For example, I've been around for quite a few years and have *never* in my life seen a census-taker. McMichael has never seen one either. This also includes both our families; we've never been contacted. If this is an indication of the accuracy of the Federal Census, then we may have a bigger population than China right now. However, those dear, dear Internal Revenue kids know all about me.

● *I was reading in your mail column in MI where two mice were found in the glove compartment of a car which was locked and had no holes. You said something must have laid two eggs in there. First of all, mice don't lay eggs and they don't come to life from an egg.*

Tommy Kissinger
McKinney, Texas

Well, you learn something every day, Tommy.

● *I noticed in your article on great cars that you gave no mention to the Cord car. Was this an oversight or wouldn't you put it in the class of cars that you were talking about?*

Elmer A. Norwick
Tucson, Ariz.

It was considered an unusual car but never a great one—except in England where they manufactured special universals for them.

● *I drive a 1959 Chevy Six and average about 18.5 mpg, which I think is quite good in Los Angeles traffic. My problem is this joker in our office who has a hopped-up '59 Impala V8 and claims to get 22 miles per gallon. I've ridden with this guy and he is a real leadfoot who treats every intersection with a traffic signal as his own private drag strip. Is it possible to get good mileage and still drive like a madman? I find it a little hard to believe.*

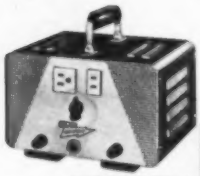
Harry Kohler
Los Angeles, Calif.

Impossible.

● *I was wondering if you could set me straight in relation to a statement made by an acquaintance of mine who believes that an Austin-Healey 3000 four-seater becomes difficult to handle with rear seat passengers*

[*Continued on next page*]

The Miracle of Transistors Brings You



110 AC FROM BATTERIES

ESB PACKAGED POWER

ACTIVERTER

©1960

Dependable Power for Hundreds of Uses

Now — using a totally new concept in electronic design — the ESB engineers have developed a revolutionary, fully transistorized inverter-charger, the ESB ACTIVERTER. This major breakthrough in "packaged power" means that you can now have the convenience and the utility that 110 Volt AC current can bring, and you can have it wherever you can take a 12 Volt storage battery!

Just connect the ESB ACTIVERTER to a battery and you can have 110 AC instantly, anywhere, for many hours. You can plug in portable electric power tools, an electric blanket, electric lights, even a television set! A flick of a switch and the ESB ACTIVERTER fast or slow charges 6 or 12 Volt batteries.

Compact, Rugged, Truly Portable

The compactness of the ESB ACTIVERTER design makes it possible to have a 12 Volt storage battery, an inverter, and a battery charger all in one self-contained and portable package. One PAK-O-POWER ACTIVERTER model provides a source of 110 Volt AC, with an output rating of 500 Watts, in a package the size of a portable picnic cooler! Because solid-state electronic components are used throughout, ACTIVERTERS are both rugged and lightweight. There are no moving parts, no vibrators.

4 Sizes — from 150 to 500 Watts

MODEL I-152 INVERTER — Inverter only, operates from direct connection to 12 Volt battery or through cigarette lighter socket of cars with 12 Volt systems. Output ratings: Intermittent Use — 150 Watts, 1.5 Amps. AC . . . Continuous Use — 125 Watts, 1.2 Amps. AC. Shipping Weight: 8 lbs.

MODEL IC-252 ACTIVERTER — Inverter-Charger operates from direct connection to 12 Volt battery. Output ratings: Intermittent Use — 250 Watts, 2.3 Amps. AC . . . Continuous Use — 200 Watts, 1.8 Amps. AC. Shipping Weight: 16 lbs.

MODEL IC-202P PAK-O-POWER — Inverter-Charger with compartment for 12 Volt battery. Completely self-contained unit. Output ratings: Intermittent Use — 250 Watts, 2.3 Amps. AC . . . Continuous Use — 200 Watts, 1.8 Amps. AC. Shipping Weight less battery: 22 lbs.

MODEL IC-506S PAK-O-POWER — The Multi-Service Inverter-Charger-Car Start unit, with large 12 Volt battery compartment and Car Start leads. Completely self-contained with built-in fast and slow charger — Charging rate: 60 Amps. for 6 Volt, and 40 Amps. for 12 Volt batteries. Output ratings: Intermittent Use — 500 Watts, 4.0 Amps. AC . . . Continuous Use — 300 Watts, 2.5 Amps. AC. Shipping Weight less battery: 55 lbs.

ESB PACKAGED POWER — THE ELECTRIC STORAGE BATTERY CO. Makers of Willard - Exide - GRANT - WIRCO - Jordan

The Electric Storage Battery Co.
Automotive Division — Dept. MI-2
P.O. Box 6266 - Cleveland 1, Ohio

I want to use 110 Volt 60 Cycle AC for _____

Please send me ESB ACTIVERTER information without obligation.

Name _____

Street _____

City _____ Zone _____

State _____

at turn-pike speeds. Is this true or not?

Martin Garelick
East Meadow, N.Y.

It depends on whether the rear seat passengers are sober.

● *I went for one of those TV wonder waxes a short while back and spent a hot Saturday afternoon getting the old boat to shine like the top of your head. My car looked great but two days in the hot sun at the beach and it was as dull as ever. It was "quick to apply" but it came off just as quick. How about an article on car finishes and polishes that will last for a few weeks at least? There must be something that will.*

Howard Jarret
Flushing, L.I., N.Y.

Roscoe Rathead once said, "There just ain't no easy way." Some of the quick polishes do a real fine job but most of them break down quickly under hot sun, dew and dust conditions. The biggest killer of any wax-type finish is to allow the car to stand out all night, getting coated with dew, and then place it where the early rays of the sun can fry it out. Even the best polishes will break down quickly under this treatment. The dew droplets act as tiny magnifying glasses, burning holes in the finish.

● *How are the chances to be a sports car driver for girls?*

Brenda Montz
Bethlehem, Pa.

Dandy, if you know any girls who want a sports car driver.

● *I finally caught you making a goof. "SAAB" is spelled with capital letters because it is not really a name but an abbreviation.(Look on its mudflaps if you don't believe me.) Worm your way out of this one!*

Harold Johnson
St. Paul, Minn.

I'm not quite wormy enough, Harold.

● *Is there really a reason for the egg shape of the Volkswagen?*

Fritz Hansmann
Littleton, Colo.

Possibly because Ferdinand Porsche liked chickens.

● *In the July 1960 issue of MI you answered a question by a Mr. Black of Fresno, Calif. concerning gas consumption figures in your car test articles. In your answer you stated,*

[Continued on page 52]

exclusive AC isovolt electrodes

run cooler, wear better to give you best performance and economy!

You'll get superior spark plug performance and economy when you switch to AC Fire-Ring Spark Plugs. One big reason is the structure of AC electrodes.

AC electrodes are heavier and more massive than ordinary electrodes—and this alone gives them better heat dissipation and longer life. But the pay-off is in their exclusive Isovolt alloy—a patented formulation of nickel, chromium and barium—that provides maximum resistance to gap growth, gap bridging and gap wear.

AC Fire-Ring Spark Plugs with Isovolt electrodes and AC's famous "Hot Tip" insulator give you longer, surer firing, with less service and maintenance. Whenever you need spark plugs, ask for ACs.

AC SPARK PLUG ⊛ THE ELECTRONICS DIVISION OF GENERAL MOTORS

**All AC Automotive Spark Plugs feature Isovolt Electrodes. Shown is Extended Shell design.*

AC

fire-ring spark plugs

They must be the best!

"TOOK IN $217 FIRST 10 DAYS"

Some make more, some less...

We help you to start Your Own All-Year Business

Make Big Money! With our easily operated, highly efficient Wall Washer, Charles Stelle took in $217 in first ten days. E. L. Goss took in more than $10,000 in one year. G. H. Jones wrote, "*I made a net profit of $1200 on one job.*" And no wonder—this machine washes walls 6 times faster and better than by hand and with no mess—no drop cloths needed.

Your Money Making Opportunity • We want more men to go into this profitable business for themselves and enjoy independence—freedom from layoffs and bosses. Customers everywhere—homes, offices, schools, churches, hotels, etc. How much you earn depends largely on you. What you take in is mostly profit. No need to rent shop or office; operate from home. Can start spare time until your full time is justified.

Lose No Time—Send Coupon Today for All the Facts

FREE BOOK! MAIL COUPON TODAY!

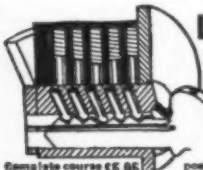
VON SCHRADER MFG. CO.
112 "W" Pl., Racine, Wisconsin

Send at once (no obligation) your **FREE** booklet containing information about your WALL WASHING MACHINE and how I can start my own permanent, profitable business.

Name_____

Address_____

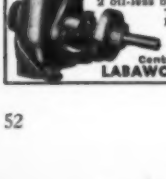
City_____ Zone____ State_____



Locksmithing AND KEY MAKING

Now Made Easy! Practical up-to-date course teaches you how to pick locks, decode, make master keys, repair, install, service, etc. New self-instruction lessons for every handyman, homeowner, carpenter, mechanic, service station operator, fix-it shop, hardware dealer, gunsmith. 53 easy illustrated lessons. Full price only $5.95 postpaid; or C.O.D. plus postage. Satisfaction or refund guaranteed.

Complete course $5.95 ... now only $3.95
Nelson-Hall Co., 210 S. Clinton St., Dept. AN-3, Chicago 6, Ill.



EXCLUSIVE DOUBLE-BEARING HEAVY DUTY PUMPS

IRRIGATE • DRAIN • CIRCULATE • SPRAY

Use ¼ HP motor or larger. . . . 1 HP for up to 3,200 GPH; 1,000 GPH 60' high; or 3,000 GPH from 25' well. 1½" inlet, 1" outlet. Stainless shaft. TYPE X—$10.95
2 oil-less bronze bearings. Won't rust. ----
TYPE XB—Ball bearing model. $12.95
Best for belt drives. ---------
Postpaid if cash with order. Don't delay—send for yours today!

MONEY BACK GUARANTEE
Centrifugal and Gear Pumps in All Sizes
LABAWCO PUMPS, Belle Mead 29, N. J.

Mail For McCahill

[*Continued from page* 50]

"For all cars in reasonably good shape, the biggest factor in gas consumption, whether high or low, is the bufflehead behind the wheel." In a recent issue of another magazine there appears an article which states the following: "There is not one shred of evidence to substantiate the theory that average driving habits, good or bad, significantly affect the miles-per-gallon figures of any car." I wonder if you would be kind enough to explain this difference of opinion?

K. D. Rooke
Beloeil Station
Quebec

The other guy doesn't know what the hell he's talking about.

● *I would like to make a comment on glove compartment doors. I seem to find it necessary to slam mine to make it stay closed, and became the victim of a black and blue thumb nail from getting it right under the latch while slamming the door shut. My wife had a similar accident to a finger joint and as a consequence the joint has a nob over the finger which is disfiguring. Why don't the automobile manufacturers come out with a magnetic holder for the glove compartment? Just a gentle close instead of a slam?*

R. W. Pedersen
Boyd, Minn.

Sorry about your wife's nob but it sounds like you've got a helluva good idea with that magnetic door lock. Incidentally, how would you lock it? Still think it's a great thought but Detroit probably won't agree.

● *I have started a home museum for miniature cars and am continually searching for car kits and pictures. I would appreciate a letter from you which I shall frame in my museum. Perhaps some of your readers may be able to help with suggestions.*

Jim Bracken
13 Tichenor Terrace
Irvington, N.J.

Okay, readers, help him.

● *In your column in the July 1960 edition of* MECHANIX ILLUSTRATED *you answered an inquiry regarding an alleged boat hauling shakedown racket by citing a personal experience. The law in South Carolina is definite on the maximum width of vehicles and loads which may use the highways. Under this law, maximum width for free movement is 8 feet. Through the office of our State Highway Engineer, however, we issue permits for the*

[*Continued on page* 167]

NEW TEMPEST

AMERICA'S ONLY FRONT ENGINE ⇔ REAR TRANSMISSION CAR

155 H.P. FROM FOUR CYLINDERS*

(Gas-saving 4! 50-50 balance! Seats six men! Priced with the compacts!)

The new-size Tempest is primed to scoot on less gas! Five hot versions of the Trophy 4 engine. 110 to 155 h.p. Any choice will move out in a hurry, sail up a steep hill in high gear, has the power for quicker, safer passing. Tempest has it!

Front engine is balanced by rear transmission. (Standard stick shift or extra-cost automatic.) Cuts weight in the front. Easy steering. Longer tire life. Adds ballast in the rear. Improves traction and braking. No big floor hump. Independent suspension at all 4 wheels. Most other cars only have it in front. Wide-Track, too. Gives a solid stance. Secure cornering. There's a 4-door sedan and a station wagon. Prices come close—or even beat—the tags on the compacts. If you're figuring on a new car—figure on a Tempest. See your Pontiac dealer. Drive it.

*With optional 4-barrel carburetor and automatic transmission.

PONTIAC MOTOR DIVISION • GENERAL MOTORS CORPORATION

THE HOT TOPIC IS THE NEW TEMPEST BY PONTIAC

CHOOSE YOUR JOB TRAINING—THEN LEARN BY DOING

Exciting work—if you can get it. To land a job as a Telephone Lineman, you need **training.** The kind of training you get through the Army Choose-it-Yourself System.

If you qualify (by passing aptitude and physical exams), this system lets you choose your job training **before** you enlist.

On-the-job or in school, Army training is practical. You learn by doing, and it helps you move ahead fast in the Army.

You can choose from many different kinds of job training. Telephone Maintenance is one possibility. There's also Motor Mechanics, Electronics, Missiles, Military Police, Aircraft Maintenance—to name a few. Ask your Army recruiter to show you a complete list.

Can you qualify for the job training you want? It's easy enough to find out.

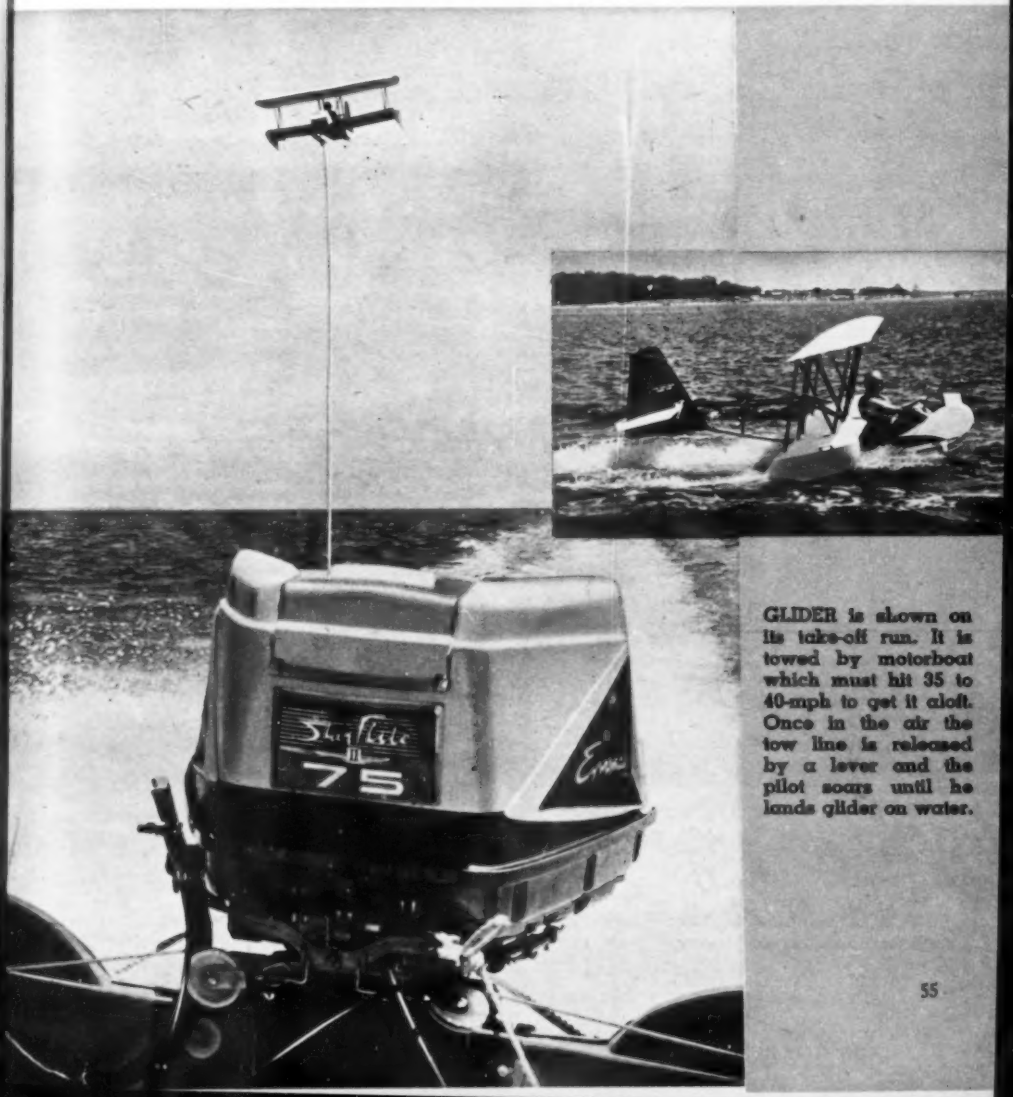
Before enlistment. Without obligation.

CHOOSE-IT-YOURSELF VOCATIONAL TRAINING SYSTEM **US ARMY**

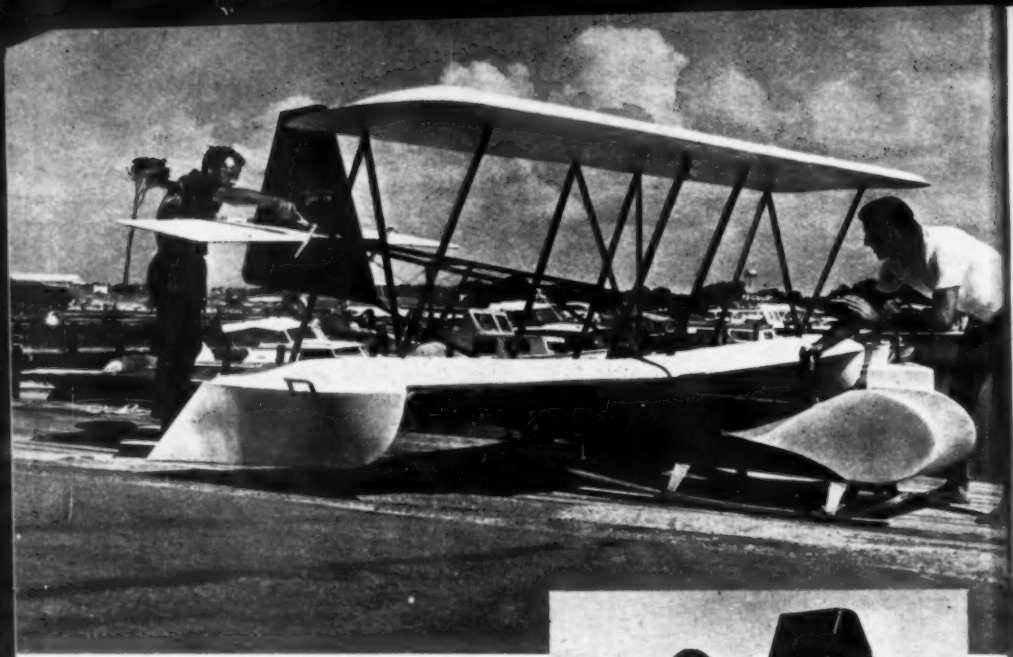
HERE'S THE Sea-Glider

SOARING up to 600 feet above the water in his motorboat-towed, double-wing glider is Captain Bill Skliar's idea of fun. The Army Air Force test pilot and engineer—he's stationed at Eglin Air Force Base in Florida—designed and built the ski-mounted craft to combine water sports and flying.

Skliar's plan was to build a small, simple glider with a low stalling speed. He made a drawing of a scale model

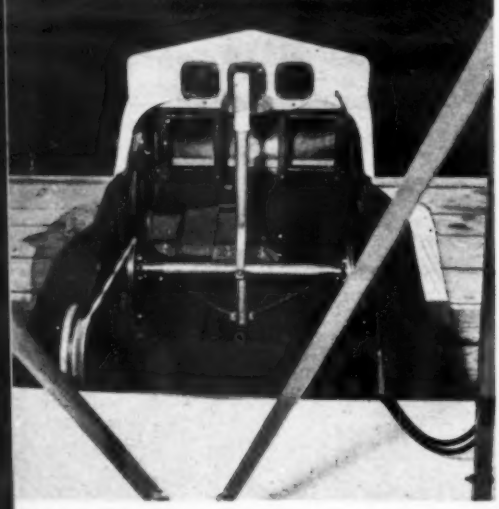


GLIDER is shown on its take-off run. It is towed by motorboat which must hit 35 to 40-mph to get it aloft. Once in the air the tow line is released by a lever and the pilot soars until he lands glider on water.



WINGTIP floats on lower wing support unbalanced load when the pilot steps aboard.

PILOT, creator and builder of the glider, Capt. Bill Skliar, makes tail adjustment.



COCKPIT contains dashboard with instruments, joystick to control craft in air.

SIMPLE cable control system operates the stabilator, rudder extention, ventral fin.

and then built a working model.

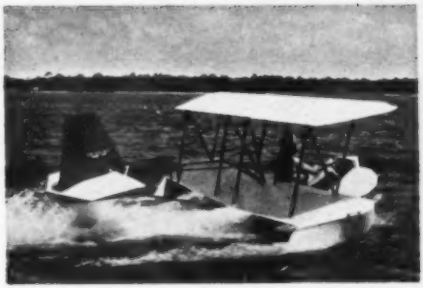
When he was ready to build the full-size glider, Skliar asked Boy Scout Explorer Squadron 508 to help him and with their enthusiastic assistance the glider was completed in June 1959.

The craft is 12½ feet long. Its upper wing is 16 feet long and the lower one 15. It weighs 165 pounds and takes off at 35 to 40 mph. The materials used in the glider are fabric, spruce, fir, mahogany plywood, stainless steel, and aluminum hardware. The tail contains three pounds of lead ballast. Captain Skliar's creation proved to be a rugged baby. Its wings are designed to withstand a four-G load at 65 mph.

While being towed, the glider gets up on its skis at ten mph. Any small boat capable of 35 to 40-mph speeds can be used to tow it. When not in use, it can be kept in a one-car garage.

The glider can be flown by a student pilot with solo experience, claims Skliar. Most flights are made with 200 to 400 feet of towline which allow an altitude of from 130 to 240 feet. Maximum altitude is around 600 feet on 1,200 feet of cable. Top speed is about 60 mph.

The glider would lend itself to kit-type construction, according to Skliar, who has filed a patent application for his fun craft. •



GLIDER stands up on its skis at about ten mph when it is in process of taking off.

ALOFT! Towline hook is designed to drop rope if too much slack develops in line.

HAND-PADDLING Bill Skliar after soaring adventure. Craft has been up to 600 feet.

OUTDOORS
with
W. Scott Duncan

BASS FISHING IN THE WINTER

BASS fishing has only recently become a year-'round sport. In 1941 only a few states let you fish for bass during the winter. By 1951 it was 19 states; today you can catch bass all winter in 34 states.

The states that still say no are all in the north. They are the New England states, North Dakota, Washington, Iowa and the Great Lakes states except for Illinois, Indiana and Ohio—14 in all. The conservationists in those areas explain that the growing season for bass in those parts is too short to warrant lengthy open seasons.

How do you fish for bass during the cold months? Summer and fall methods no longer pay off, even in the south, once the cold sets in. The reason is that in winter the lakes are cooler at the surface than below and the fish sink to lower, warmer levels. Deep-water fishing requires its own lures and techniques.

In states north of parallel 40, to fish successfully for bass you must use two methods. Where ice covers the lakes and rivers, you cut holes in the ice and fish through them with live bait or jig spoons and jigs. Where there is open water, bass are most successfully caught by trolling deep, jigging and still-fishing with live bait, fishing over sunken bars and ledges and in holes near drop-offs.

South of parallel 40, bass waters seldom, if ever, freeze over for long. There deep trolling and jigging is the rule.

South of parallel 40 there are thousands of good bass fishing waters. Among the [*Continued on page* 160]

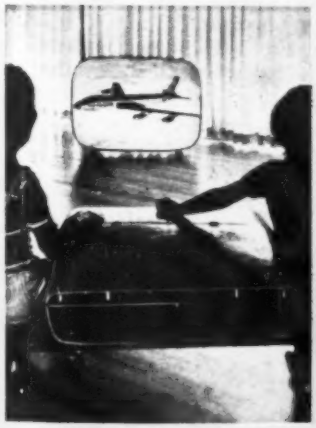
WINTER BASS: the author and Will Glen, his guide, with largemouths taken in Salt Run, Florida. January, February and March are fine bass months there.

COMING SOON....

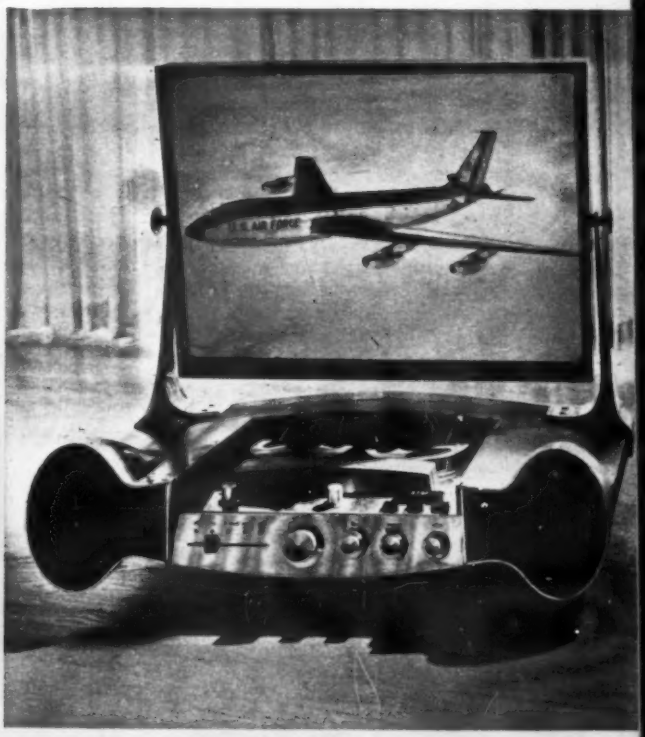
TV TAPE RECORDERS

WOULD you like to record your favorite TV program—both sound and picture—on tape for future viewing? Well, the debut of the home TV tape recorder is not far off. The eye-catching designs on this page are experimental mock-ups by Syracuse University students. They were created to show in exact detail what the commercial TV tape recorder might look like. The sets are designed around the circuitry of the Ampex VR-1000 network video tape recorder. But for home use, the electronic components have been modified and miniaturized with the aid of the General Electric research staff. The home TV tape recorder comes one step nearer! •

TV TAPE recorder-playback console by Robert Clowe records sound and/or picture for playback.



STRIKING unit designed by Albert Straus weighs about 150 pounds. Clowe console is 300 pounds.



MOCK-UP by designer Edward Meisner. Components have been miniaturized without sacrificing screen size.

INFRAPHONE sends voice messages hundreds of yards on a beam of invisible infrared radiation. Unit is aimed like a camera at other operating unit.

INFRARED

A NEW type of walkie-talkie communications system that uses infrared radiation as the voice-carrying medium has been developed by Infrared Industries, Waltham, Mass. Called the Infraphone, the device is held in the hand and aimed at another unit within line-of-sight; an infrared beam carries the conversation between the two units. Both phones are identical transmitter-receivers. Equipped with pistol-grips and rifle-style sights, the 26-ounce phone is easy to hold and to aim.

Power for the Infraphone is from three flashlight batteries. The beam that carries conversation between the two

TOP aperture is the beam receiver; bottom one sends infrared beam carrying voice.

MIKE is at back. Vocal sounds that are spoken into mike modulate infrared beam.

RECEIVING and sending go on simultaneously over two beams, eliminating "over to you" procedure. Earphones keep the conversation private between users.

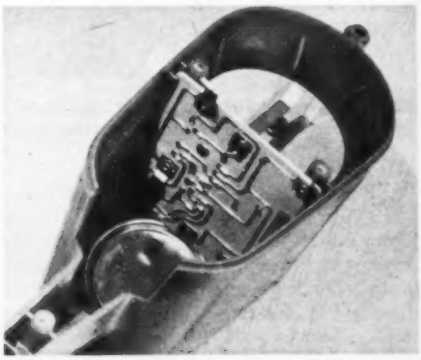
WALKIE-TALKIE

units can travel through closed windows and can be sent around corners by being reflected off an angled mirror. In bright sunlight the Infraphone's range is about 1000 ft. At night the range is 1500 ft.

The makers intend to market Infraphone through electronic supply houses, hobby shops and sporting goods stores. They foresee many applications including ship-to-shore, civil defense and possibly by the Armed Forces.

Infraphone is not subject to FCC regulations and no license is required to operate. It is presently being sold by Lafayette Radio, Jamaica, N. Y. Price is $39.95 for two units. •

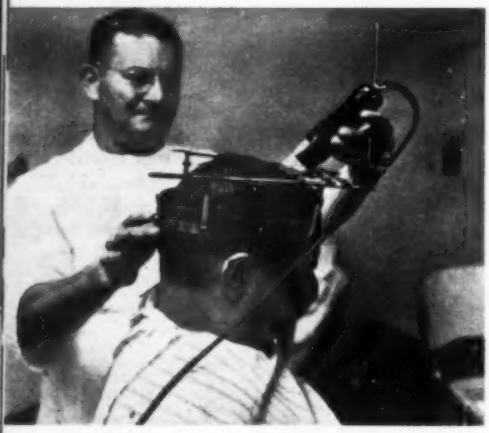
SOURCE of light at bottom is a flashlight bulb radiating through the infrared filter.



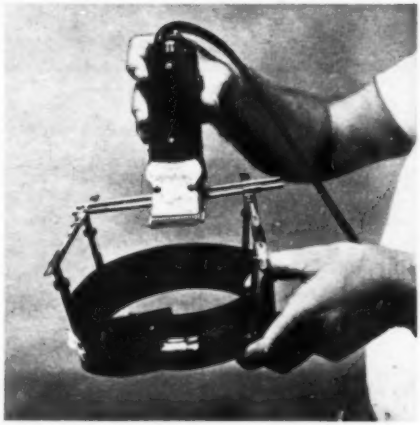
SOLID state (no tubes) device uses a printed circuit transistorized amplifier, three D cells.

FOR THE PERFECT FLATTOP

FLATTOP devotee examines device that did job. Barber is Norton, the proud inventor.



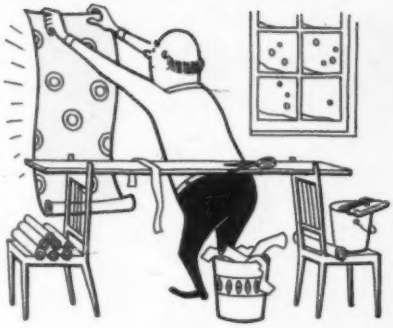
MOWING on horizontal plane, rig gives a good, safe clipping to flattop connoisseur.



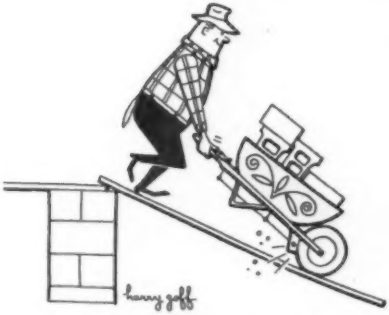
RIG does flattop cutting in ten seconds, cuts haircut time from 25 to ten minutes.

YOU don't have to have a flat head to get a flattop haircut, men! Barber Dennis A. Norton of Huntsville, Ala. has invented a device that fits right on the enthusiast's bean and insures a perfect flattop. It consists of a leather band which fits around the head. It has four adjustable metal posts and two side tracks, one above each ear. A double bar mount for the clippers slides back and forth as they mow. The mounted clippers prevent any jogging which could result in a zig-zag cut. Thus when a customer steps down from the chair his head is not only flat on top, it's also horizontal, man! •

HINGED SALT SHAKER top with prongs that go into perforations to clear them of salt. John Potsileko, Long Beach, Calif.



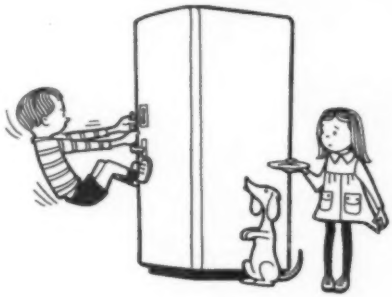
INSULATING WALLPAPER, backed with aluminum foil, to help insulate while decorating old houses. A. Tabak, Melrose, Mass.



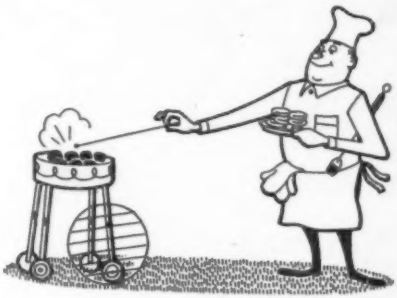
BARROW HANDBRAKE, bike style, to prevent sliding and spilling when carrying heavy loads. Mike Rice, Ben Arnold, Texas.

INVENTIONS WANTED!

Is there a gadget you think should be invented? If so, send its description on a postcard to Inventions Wanted Editor, MECHANIX ILLUSTRATED, 67 West 44th St., New York 36, N. Y. Each one printed will be awarded $5. Entries not selected cannot be acknowledged or returned.



REFRIGERATOR LOCK to foil the raiders while Mother isn't standing sentry duty. Maurice Peacock, Jr., King of Prussia, Pa.



CLEAN BRIQUETTES coated with a flammable substance for clean hands, easy kindling. J. F. Thompson, New Kensington, Pa.

POWER-BLOK will prevent kids from plugging in your power tools and hurting themselves.

LOCK FOR *POWER TOOLS*

UNIT is locked with key. Power-Blok can also be used on appliances, radios, etc.

POWER-BLOK slips onto the prongs of a power cord—two or three-prong jobs—and is locked firmly in place with a key. The device prevents anyone—especially the kids—from starting your power saw, lathe, etc. Hurd Lock & Mfg. Co., Almont, Mich. $1.49. •

WIN $50

MI will award $50 each month to the first person who tells us of a new and useful gadget that is patented and in production. Manufacturers are also eligible for this award. Pictures and a description should be sent to Bright Ideas Editor, Mechanix Illustrated, 67 West 44th Street, New York 36, N. Y.

BIG BOOM in U. S. stamps

By Lester David

FIFTEEN million stamp collectors—that's the happy estimate, and with that many people soaking stamps off envelopes you can readily see why philately (stamp collecting) is a good business for dealers, book publishers and governments. But the pros (who frequently started out as amateurs) aren't the only ones making dough out of stamp collecting. Through shrewdness, sheer luck and sometimes a combination of the two, amateur stamp collectors keep finding that their stamps are worth money—real talking money.

For instance, a paper dealer was carting piles of old papers away from a

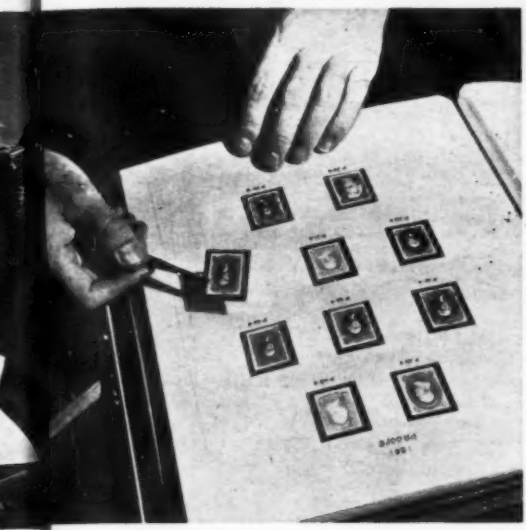
VARIETY of stamps is shown in this U.S. periodical stamp next to tiny Dutch job.

TWEEZERS should always be used when handling old or costly stamps. Grip at edge.

BERNARD HARMER of H. R. Harmer, stamp dealers, uses lens to verify stamp details.

Philadelphia bank one day when he noticed some queer-looking stamps on a bunch of yellowing envelopes. On a hunch he pocketed the envelopes. Later he found, from a dealer, that the stamps were St. Louis provisionals, issued by the St. Louis postmaster back in the 1840s. Their value: $100,000. Two janitors in a Kentucky courthouse found $23,000 worth of provisionals in the wastepaper one day. A man buying $1 stamps in a Cleveland post office noticed that one of the sheets had no horizontal perforations. It was a manufacturing mistake that made the stamps rare—so rare that a dealer who bought the sheet could break it up into blocks of four and sell them for $1,000 a block. Finds like these are not so very rare, according to stamp expert Ernest A. Kehr, who says that similar cases are being reported in the philatelic press with "amazing frequency."

Of all those 15,000,000 collectors only a handful start out looking for a gold mine, of course. But even those who collect for mere fun can feel that they aren't wasting time and money on a hobby that will never repay them. Stamps have value, and their value increases with age. A window cleaner who once bought $100 worth of Kansas-Nebraska overprints was able, 15 years later, to buy his bride a mink coat with them; their value had increased to $3,000. Anybody's collection, if put together with reasonable judgment, can be sold for a profit or used as collateral



STAMPS can be mounted in different ways. These are hinged to black paper backing.

STRONG LIGHT reveals printing irregularities and watermarks imprinted in paper.

on a loan.

The big new thing in stamp collecting, as in antique collecting of late years, is Buy American. Many issues of Yank stamps have zoomed 500 to 750 per cent or higher. A set of Graf Zeppelin stamps that sold at face value in 1934 is worth ten times that now; a 1924 Huguenot-Walloon issue has doubled in value in the last five years. The big rise in value is due to the tremendous number of new collectors—a good 5,000,000 have joined the philatelic ranks since World War II. More are expected in the years to come. For those who are starting out as collectors, here are the big questions and answers, as elicited from experts among collectors and dealers:

What equipment do you need to start?

First you need an album. Four bucks buys one that will hold all the issues ever put out in the U. S., with stories of their historical background. Then you need stamp tongs to grip the stamps, which deteriorate rapidly if handled repeatedly. Good tongs cost about a dollar. Stamp hinges are the standard way to fix stamps in the album without lessening the value of the stamp; the hinges sell for a few pennies a thousand. A fancier way is to put the stamps in "mounts"—transparent envelopes with gummed backs. A magnifying glass is essential, too; collecting stamps without one, says one oldtimer, is like "going into a cave without a flashlight."

What books do you need?

You need catalogues. Leading catalogues for U. S. stamp specialists are the first volume of Scott's Standard Postage Stamp Catalogue, Scott's United States Stamp Catalogue Specialized and Minkus Publications' New American Stamp Catalogue. There are others, and all are available at stamp dealers.

Some good books offering guidance to the collector: Postage Stamps Of The United States, 1847-1959; Cat. No. P4 10:959, U. S. Government Printing Office, Washington 25, D. C., $1. Romance Of Stamp Collecting by Ernest A. Kehr, Thos. Y. Crowell Co., N. Y.; My Hobby Is Collecting Stamps by Ernest A. Kehr, Hart Book Co., N. Y.; The Complete Guide To Stamp Collecting by Prescott H. Thorp, Minkus Publications, N. Y.

Where do you get stamps?

There are 5,000 stamp dealers in the U. S. See the [*Continued on page* 162]

COVER STORY

Detroit's NEW CAR ENGINE

IT won't happen overnight but in the not too distant future many of Uncle Sam's rugged little trucks and other special purpose vehicles may be powered by the equally rugged little gas turbine engine shown on the cover of this issue. And eventually this miniature powerplant may be adapted for sports cars and then for general automotive use.

Williams Research Corp. of Walled Lake, Mich., developers of the new tur-

PRESIDENT Sam Williams displays small gas turbine to Sgt. Roger Bernier of Army Ordnance. Tiny engine is being field-tested.

ENGINEER Clay Huben makes final adjustment on 50-lb. mill. It turns out 75 hp. an incredible weight-power ratio.

bine, is even now installing one in a Ford-built passenger vehicle under an Army experimental contract. Weighing only 50 pounds, the Williams' turbine develops 75 horsepower! But the main attraction at this moment is that it would simplify the Army's supply problem because it runs beautifully on military JP-4 and JP-5 fuels, too heavy for normal gas engines.

What is a gas turbine and what makes it run?

To simplify, the gas turbine uses energy from compressed air and burning fuel to drive rotor blades which in turn drive an axle to transmit the power. Actually, air is taken in through the intake at the front and, with a centrifugal compressor, is compressed to four times normal atmospheric pressure. Fuel is burned continuously in the compressed air. The resulting high pressure gases are then expanded through stationary nozzle blading.

These gases are then directed through rotating blading of the first stage turbine wheel on the compressor shaft, its power driving the compressor. As the gases pass on through, the remaining energy in the gases drives a second turbine connected to [*Continued on page* 164]

FEATHER MERCHANT

EYES from peacock feathers are trimmed out to decorate all kinds of things—for example, high-fashion footwear for women.

WHITE TURKEY feathers are dipped with black dye in the Weinstein atelier; trim the ends and—pouf! Injun eagle feathers!

MONEY MAKING IDEA

TEN bucks and an idea put Joe Weinstein of Hollywood in the fancy feather business. The idea was buttonhole flowers made of colored feathers. Not an entirely new idea; in Biblical times feathers were popular adornments, and years later Joe was to sell a million feathers to Cecil B. DeMille to doll up The Ten Commandments, an Old Testament spectacular. But a good idea all the same. Joe bought some white chicken feathers from a poultry market and used the the rest of the tenner on dye and other simple makings. The boutonnieres took the public fancy and soon Joe had ten girls making them for him. After that he began to get calls for fancier

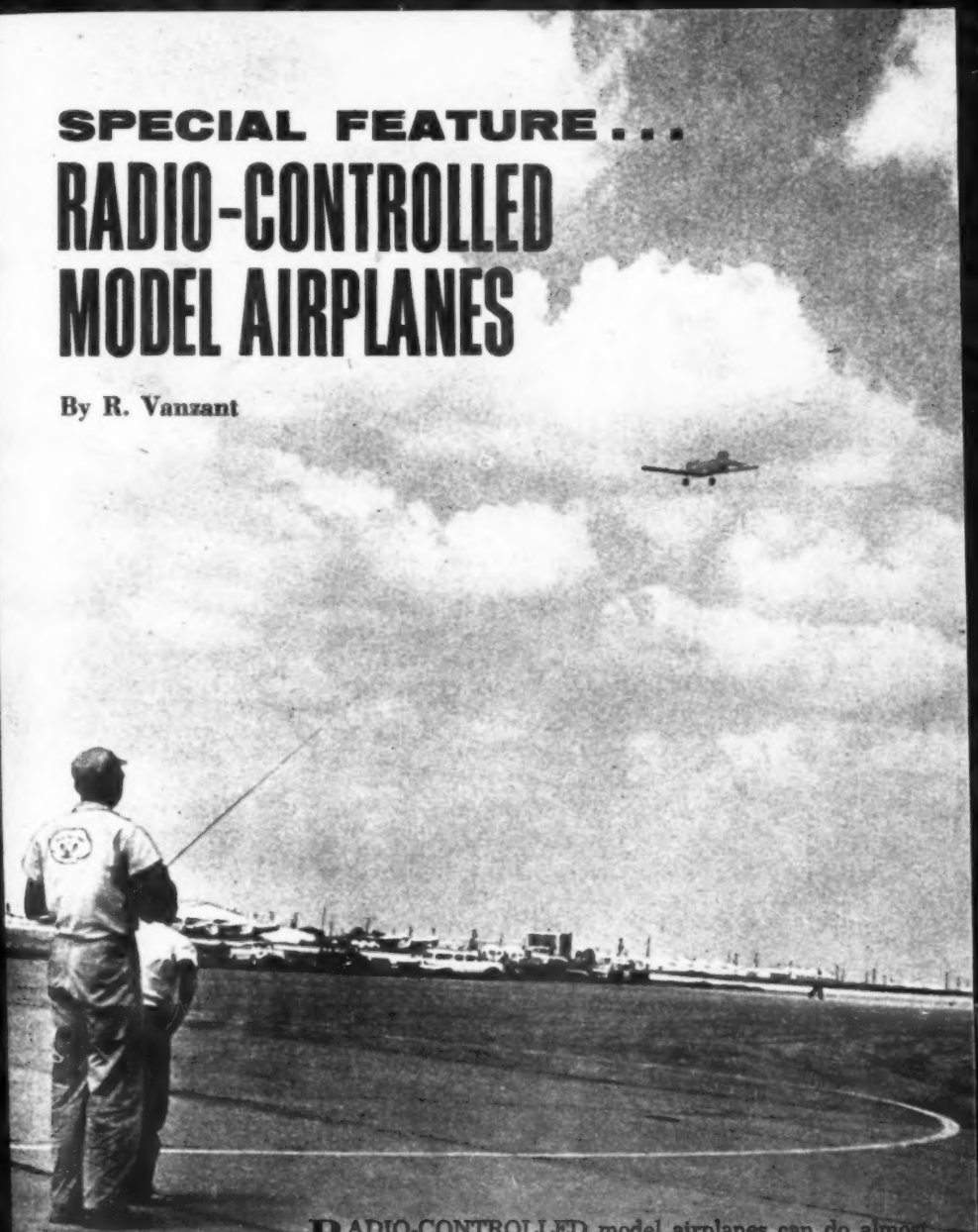
[*Continued on page* 165]

BONNETED Joe examines shipment of pheasant tailfeathers.

SPECIAL FEATURE . . .

RADIO-CONTROLLED MODEL AIRPLANES

By R. Vanzant



RADIO-CONTROLLED model airplanes can do almost anything the big planes do. They taxi down the runway alone, take off, come in for touch-and-go landings and perform all manner of aerobatics. The new multi-channel jobs can be rigged to carry aerial cameras, drop parachutes, tow gliders and do skywriting.

Most of the planes measure only four to six feet in wingspan. They are fragile affairs of balsa, glue, nylon and dope, powered by a ¼-hp, glow-ignition engine. But their resem-

LOCKUP: transmitters not in use could accidentally interfere with competing models.

ELASTIC bands attach wings to model, will release them on impact in case of bad landing or accident.

INSPECTION is pulled again and again as R/C ops sweat out their turns.

blance in the air to man-carrying aircraft is sometimes uncanny. Recently a hobbyist was flying a model Cub at a small airport when the plane developed engine trouble and dived in. A few minutes later the phone rang in the airport office. A citizen living nearby inquired anxiously who was flying the Cub that just crashed and was he badly hurt?

It is undoubtedly this realism in flight that drives many hobbyists to build model after model, changing and adapting the plane and equipment to get better performance.

Two little gadgets that give the R/C (radio-controlled) plane its maneuverability are the radio receiver and transmitter, which range from the relatively simple single-channel radio to the complicated ten- or 12-channel outfits. The more channels, the more aspects of flight that can be controlled. The single-channel rigs are usually equipped for rudder and motor speed control; the typical eight-channel outfit has controls for elevator, rudder, aileron and motor speed.

The receiver, which is fitted into the fuselage of the plane, just back of the engine, gas tank and batteries, is usually about the size of a pack of cigarettes and may weigh as little as two ounces. The hand-held transmitter is about the size of a cigar box and weighs about four or five pounds.

Both transmitter and receiver are battery-powered and the switch of each must be flipped to the "on" position before each flight. The radio signal is usually a tone of audio-frequency transmitted by operating buttons or levers on the transmitter. In single-channel equipment, the transmitted signal causes the receiver to close a switch, commonly called a relay. This, in turn, triggers the operation of an actuator or escapement, which moves geared arms connected directly to the surface that is to be moved on the plane. In multi-channel equipment, the principle is the same but the tones transmitted vary in pitch for each control movement de-

NATIONAL MODEL MEET at the Naval Air Station, Dallas, July 1960, was typical of these peak events for plane modelers. Photos here show the contestants in R/C events—a few of those enthusiasts who came from 50 states, Mexico, Peru, Argentina and Canada. Meet was sponsored by Academy of Model Aeronautics and the Navy.

GLOW PLUG is hooked up to batteries, detached after the midget engine has started up.

EYES UP on his maneuvering model, a contestant handles his transmitter with a practiced hand, never glancing at it.

sired.

Most receivers are built to operate on one of the six "citizen's bands" between 26.995 and 27.255 mc. Although each radio operator is required to have a license from the Federal Communications Commission for these bands, it is issued free and without examination to any citizen over 18.

The beginning modeler can expect to spend a minimum of $75 to $100 to get started in his hobby. The experts unanimously advise all learners to start with a single-channel transmitter and receiver. These can be obtained for around $25 to $100, assembled, or in kit form for $18 to $50. The multi-channel outfits may sell for as much as $300 to $400.

Other equipment necessary for R/C modeling includes, of course, a plane. This can be bought in a kit with pre-cut balsa, full-size plans and complete hardware. The kit planes come in many sizes, ranging in wingspan from about three to eight feet. The medium-sized, more stable plane is best for the learner. The price range is from around $5 to $27.50.

Next requirement is a glow-ignition engine. This is a single cylinder, two-cycle engine which is almost a miniature version of a lawnmower engine. To start the engine the glow plug is connected to a battery, an element in the glow plug becomes red hot and this ignites the fuel mixture when the propeller is flipped. After the engine is running the heat generated by the burning fuel keeps the process going and the battery is disconnected. The fuel used is composed principally of alcohol and castor oil. These engines cost from $4 to about $45.

The next thing needed is a control unit, which is most commonly an escapement or servo. The rubber band-powered escapement contains an electro-magnet that stops a crank arm in given positions and, through linkages, moves the control surfaces. The servo, used mainly on multi-channel equipment, is basically a miniature battery-powered motor. Escapements average about $8.95, servos about $13.

Finally, there are several miscellaneous needs such as batteries for powering the radio equipment and for starting the engine, and a few pieces of testing apparatus for testing voltage.

Another requirement for R/C flying, not easily come by in some city areas, is a flying field. Some model clubs rent flying privileges from a farmer, some are lucky enough to have a small airport nearby where, at specified hours, they can use an idle runway.

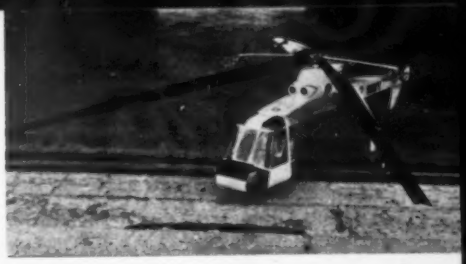
Most R/C hobbyists are protected by insurance which covers any injuries or damages caused by their planes in flight. Such incidents are luckily rare.

There are now over 200 R/C clubs in the U. S. and their members each year

AT TAKEOFF this R/C model is dwarfed by full-sized men and the desert of concrete.

IN FLIGHT over horizon, model takes on a remarkable resemblance to full-size plane.

P51 MUSTANG won in scale-model class. Builder: W. J. Murphy of Hawthorne, Calif.



SIKORSKY S64 helicopter crane has complete performance—all under radio control.

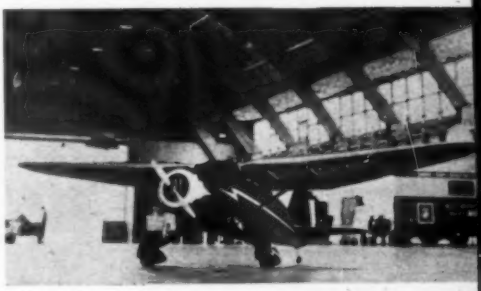
PIPER CUB built from plans in AMA magazine took 30 months. Engine is homebuilt.

take part in many intra-club and regional contests. The peak competition is the National Model Airplane Championships, which include a special R/C division. The Nationals are always held on a naval base and are sponsored jointly by the United States Navy and the Academy of Model Aeronautics, the official organization of all model airplane flyers in the United States.

Perhaps the most exciting R/C events at the Nationals are the multichannel flights. In the finals the experts are permitted to perform any of the maneuvers of the aerobatic schedule of the AMA, including loops, spirals, spins, figure eights, Immelmann turns, wing-overs, rolls, stalls and inverted flight.

R/C model clubs all welcome visitors and the members are generally outgoing fellows who will help a beginner with any problems he may have. Some clubs have a "big brother" arrangement whereby a beginner and an experienced hand at R/C are teamed together at some flying events. The first advice that these seasoned flyers have for beginners is "Keep it simple"—the novice should stick to single-channel equipment and a stable training- [*Continued on page* 163]

CESSNA OE-2 R/C model by R. W. Wischer, Delafield, Wis., against hangar background.



STINSON RELIANT model was built by Dr. Alejandro Elizando, Mexico City, Mex.

ICE PLOW

FOR THE SEAWAY

KEY: Electric rotary saws (1) mounted in pivoting frames (2) cut ice into narrow ribbons, and chippers between saw blades break them into chunks. Chunks move along hinged ramps (3) which can swing upward to close hull and form a reinforced bow. Chunks go into chute (4) and ice crusher. Ice chips then enter blower, are expelled from pipe (5). In areas around docks, ice would be temporarily stored in hold (6). At sea, twin frames are uncoupled (7), swung aft on pivots (8) and carried in deck rests (9).

FRANK TINSLEY '60

By Frank Tinsley

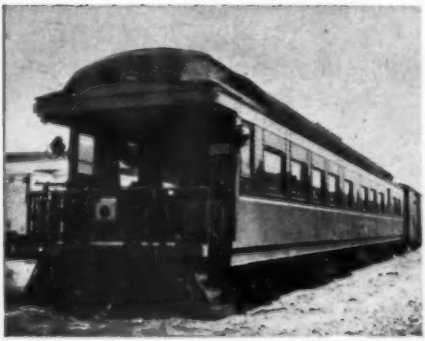
THE multi-million dollar St. Lawrence and Great Lakes Seaway has created a new American seacoast and turned inland commercial centers like Detroit, Chicago and Duluth into deepwater ports. It has also opened scores of lesser U. S. and Canadian cities to world oceanic trade. However, due to the severe winters, these areas are sealed off to Seaway traffic from December to March each year. This necessitates storing of supplies before the ice freezes and results in monumental costs that could be eliminated if these ports were ice-free year-round.

Conventional icebreakers are not the answer. While these sturdy ships do break up ice, they leave behind a mass of cracked pieces that tend to freeze again when the temperature drops. As a result, the icebreaker's job is an endless one.

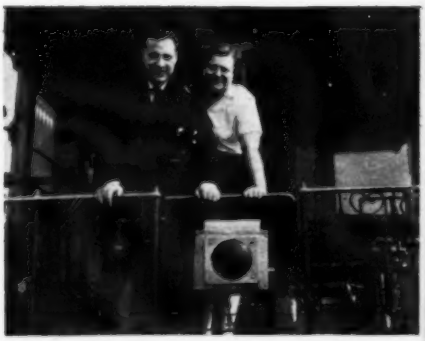
This problem has long fascinated [*Continued on page* 166]

LOUNGE view shows the spaciousness and comfort—note bar—enjoyed by lucky riders.

THEY LIVE IN A RAILROAD CAR

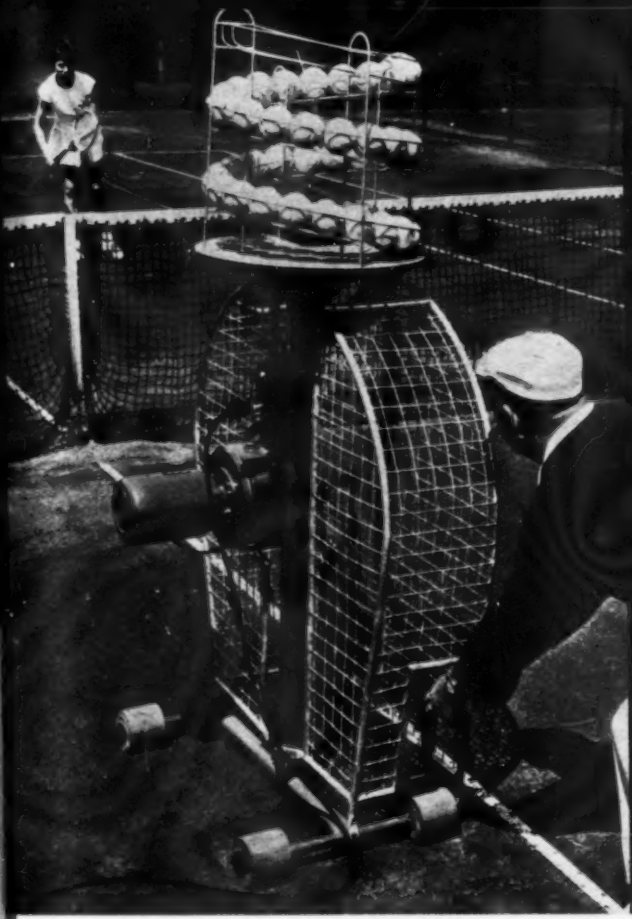


CAR (above) was built in 1926. Master bedroom (below) sports red velvet bedspread.



FINLAYS are standing on the brass-railed observation platform of their private car.

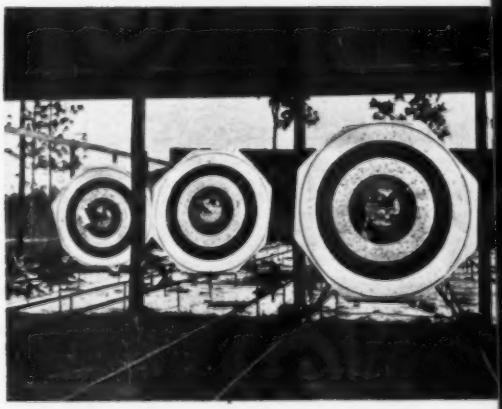
WELL, Betty and Tad Finlay of North Hollywood, Calif., don't exactly *live* in their private railroad car—but they're tempted! The Finlays have long been railroad buffs. They bought their private car and spent $35,000 restoring it. They use it for touring—at a cost of 18 fares! •



IT'S NEW!

A NICE SERVE—and just the shot she needs to practice returning—is coming up from the new Australian tennis coaching device. Machine fires 26 balls a minute with extreme accuracy.

NIGHT VISION device links scope with an infrared beam. Whoo-oo-oo-oo makes it? Intl. Telephone and Telegraph Corp., L.A.



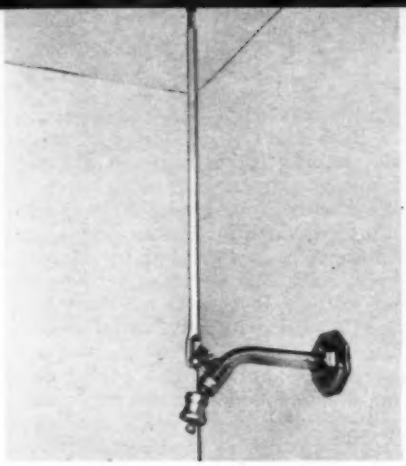
RETRIEVABLE TARGETS on tracks plus endless cables bring arrows back to bowmen at Sherwood Archery Range, Orlando, Fla.

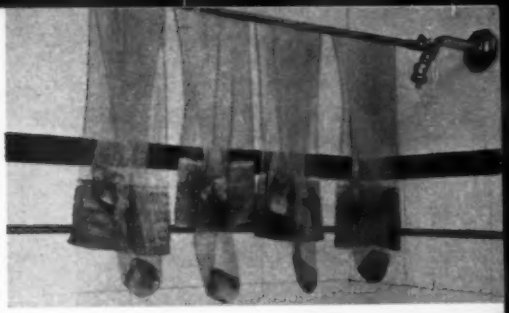
IT'S NEW!

BAKING BY PHONE: she can control any electric appliance by phone and Westinghouse relay system—which means she can put dinner in the oven, turn it off from her Canasta Club.

INKLESS FINGERPRINTING developed by Chance-Vought's Electronics Division provides an instant view of print pattern.

SIMPLE SIMONETTA? Not so dumb, Dad: that wind-up bass gives her a real fight when it's hooked. From Gong Bell Mfg. Co.

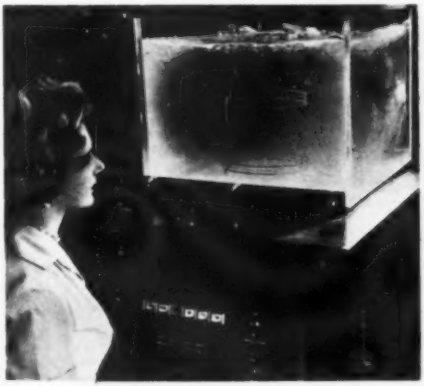




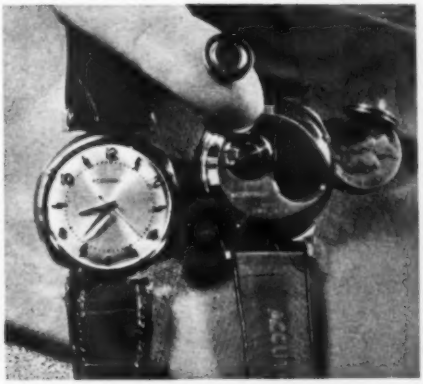
DRIP-DRY enthusiasts find this telescoping rack great for home or travel. Easy to attach (no tools), it folds out of the way when not in use (left), pulls out to 34 inches for drying (above). Goode Products, $1.98.

ELECTRONIC LECTURE: teacher on sound movie screen teaches, quizzes; student answers on buttons. Williams Research Corp.

GAS GUNS: Austrian CO_2 rifles for army training and sport. Gun holds 60 bullets, gas for 1200 shots. Right: gas refilling.



ROCKET TRACER (for planes, satellites, too) gives 3-D plotting of flying objects in clear gelatin. Chrysler Corp. manufactures device.

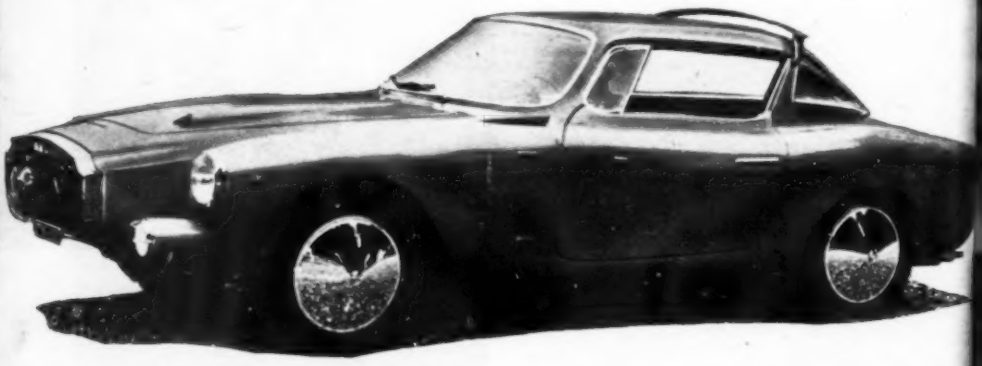


ELECTRONIC WATCH called Accutron runs on 1.3-volt mercury battery (shown on finger). The new Bulova ranges from $175-$2,500.

LOEWY'S LATEST

Features an experimental air foil aileron on the roof and a bumper that surrounds the grille!

EYE-CATCHING is the design of Raymond Loewy's latest dream car. The striking rig is built on a Lancia Flaminia sport chassis and has a V6 engine with a four-barrel Weber carburetor and Nardi air-intake. The aluminum body was executed by Motto of Turin, Italy. An air foil aileron at the rear of the roof is designed like an airplane wing and its angle of incidence is adjustable to improve performance. Loewy has applied for a patent on it. The chrome-steel framework around the perforated intake grille acts as the front bumper. This member is attached to the chassis and, under shock, slides freely inside the aluminum shell of the hood. The spare wheel is concealed under the floor and is accessible by a pivoting panel under the rear bumper. •

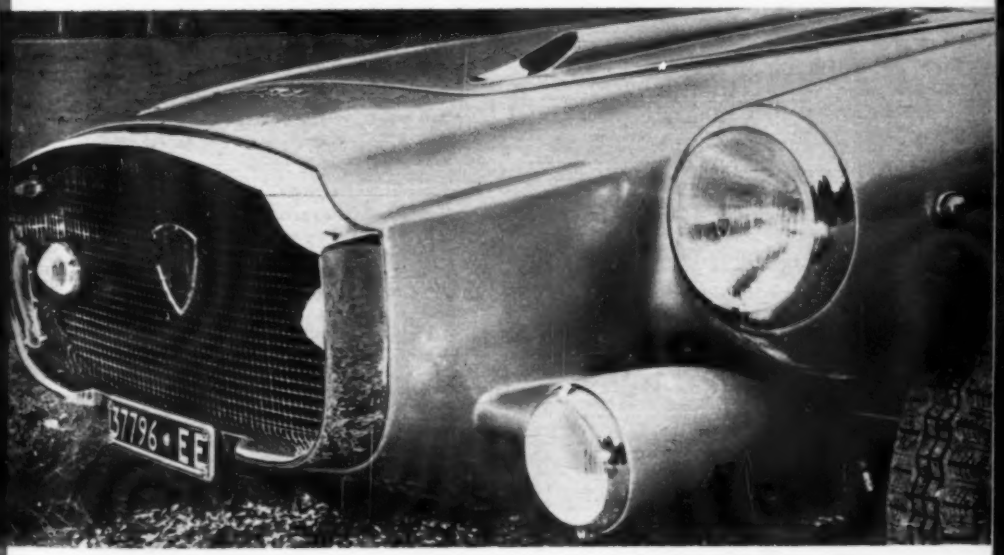


BODY is aluminum with welded tubular steel frame in shape of a rectangle.

AIR FOIL aileron at end of the roof is expected to improve performance of the car.

BOB-TAILED rear is extremely simple, has recessed lights, bar bumper, dual exhausts.

MR. & MRS. Raymond Loewy with new car that features off-center air scoop to feed carb.



CHROME-STEEL framework around grille is bumper. Fog headlights are outrigger in style.

NOW YOU CAN SKI UPHILL!

OVERSNOW rig operates via large propeller, small engine.

SKI PONY invented by German Joseph Niklas pulls one or several skiers uphill or on flat.

POWER is supplied by lightweight five-and-one-half-hp motor. The Pony weighs 80 lbs.

MOTORIZED skis can travel at 30 to 35 mph on level ground. Vehicle costs about $200.

By James Joseph

EAGER skiers, riding the double-chair lift up Oregon's Mt. Hood recently, wiped the frost from their goggles and stared. Below them a solitary skier was zooming uphill in his comfortable heater-warmed, seven-hp snow scooter which beat the lift to the summit.

In Germany recently, European skiers watched the Ski Pony, a five and one-half-hp, propeller-driven rig, pull its rider up a snow-covered slope at 30 mph.

This revolution on the ski slopes of the United States and Europe is giving a big boost to the winter sports clan and promises to bring even the loftiest peaks within the reach of the rankest novice without the laborious "herring-boning" skiers have been using for centuries to get uphill.

Here in the United States the power skis conceived by Cal-Tech engineering student Stanley Van Voorhees, come closest to automating the average skier. Van Voorhees' patented skis are driven by a back-packed three and one-half hp gas engine through flexible drive shafts. The skis are conventionally flat for going downhill but are rigged with cleated traction belts on their reverse sides. Going uphill you ride on tracks; downhill you glide on the regulation flats. The power skis will climb 25° to 30° slopes at four to eight mph. Over-snow they'll do 10 to 15 mph all day on a cupful of gas.

Aerojet General Corp. even has experimental rocket-powered skis in the works. This system takes the form of a flying suit called the Aeropak which was originally designed to lift infantrymen across rivers and over mine fields. Powered by two steam-generating rockets, the flameless 70-pound flying suit-harness includes guidance controls and provides a minute's jet-propelled flight in its twin boosters. A 20-second rocket flight packs enough power to boost a 240-pound skier a half mile. Improved models of this unit will weigh about 35 pounds.

Pocket Lift is another booster designed for the skier who likes to pick his own ski slope. The unit was created by

POWER SKIS of Stanley Van Voorhees have a back-packed engine, flexible drive shafts, are shown in position for the downhill run.

CLOSE-UP shows belt-driven tracks with flexible drive shafts attached. Throttle for gas engine is connected to ski pole.

ELIASON K-12 is two-seat, nine-hp motor toboggan with air-cooled engine. Cost: $995.

engineer Joseph Leo Hausn of Kartan, Austria. It weighs less than 150 pounds and will fit in any compact car's trunk. At the ski slope, you jack up the car's rear wheels and block the front ones. The rear tires run on rollers. The rollers power a drum wound with lightweight steel cable. Spaced along the cable are convenient handholds.

You then anchor the Pocket Lift's sheave to a hilltop tree or drive an anchor stake, slip your car into gear and, auto-powered, zoom to the summit. Estimated set-up time is ten minutes for the unit and the cost is said to be "a few hundred dollars."

The Ski-Doo is a versatile skier's aide. It's a brand-new rubber-tracked and ski-fitted snow sled that packs eight hours of fuel in its four-gallon (Imperial size) tank. Its designer is Bombardier Snowmobile, Ltd., of Valcourt, Quebec. The Ski-Doo has a heater-warmed cockpit and is powered by a one-cylinder, seven-hp gas engine. The 335-pound snow crust skimmer seats two and can run over snow that would scarcely support a skier's weight. The price is $950 in the U. S., $895 in Canada.

TRAIL-A-SLED does up to 100 mph on three skis. It can be car-towed. Price: $1,795.

The Eliason K-12 is another motor toboggan that's giving slalomers a push up high-country slopes. Powered by a nine-hp air-cooled engine, it combines a wide main track with outrigger skis which also substitute for running boards. The two-passenger rig does 25 mph over flat terrain on a gallon of gas.

SNO-TRAVELER made by Polaris Industries, Inc., sports ten-hp Kohler gasoline mill.

SKI-DOO climbs 30 per cent grades, does 25 mph with a nine-hp air-cooled engine.

Four-Wheel Drive Auto Co., Ltd., of Kitchener, Ontario makes the $995 sled.

Trail-A-Sled is a wind-whistling slope racer that will travel at up to 100 mph. It is powered by a push propeller and a 100 to 150 hp Lycoming aircraft engine. The sled rockets along on foot-wide fiber glass skis. Retractable trailer wheels convert it quickly for car-towing. Four people can ride this speedy sled which will take a 25 per cent slope with ease. The vehicle was designed by Glen E. Gutzman of Crosby, Minn.

This year's skiers at the nation's 400 resorts that cater to an estimated four million outdoor funsters will find that the trams, tows and lifts are faster and fancier. A new T-bar lift at California's Edelsweiss Ski Resort can lift 1,200 skiers an hour at better than 12 feet per second.

No less than 300 trams and tows shuttle slopes coast-to-coast. Colorado's famed Aspen highlands are latticed with 13 boosters which handle more than 5,000 skiers an hour. Aspen claims the world's longest double-chair lift—one and three-quarter miles.

Dogpower is also competing with horsepower on some summits. At Aspen you can hire a team of imported Alaskan Huskies from $25 and up per day. Chauffeured by an old-hand who knows the area, you can skim along under six to eight dogpower and take your pick of the peaks.

Donner Pass, Calif., has an aerial tram that neatly solves the problem of ski storage. Each of Donner's 12 six-passenger aluminum and steel gondolas has racks for skis outside the cars. Rubber tires, suspending cars via one and three-eighth inch steel cables, offers a virtually noiseless ride.

That's the story on the big boost for skiers this year. Take your choice—horsepower, dogpower or jet propelled power—it all adds up to less work and more fun for winter sports fans. •

BOMBARDIER Model M can do 25 mph with 115-hp Chrysler mill. Price: about $5,800.

TUCKER Sno-Cat seats up to eight passengers. It has 95-hp engine. Cost: $8,136.

PUSH-BUTTON FAUCETS

PUSH-BUTTON faucets are replacing conventional fixtures in many new homes today. This remote-control plumbing operates by solenoids—electrically operated valves. The system is called Ultraflo.

There can be as many as five color-coded buttons at the sink or on the wall. You push the H button for hot water, C for cold, W for warm, all at moderate flow. The fourth button is OFF and the fifth one is for a Fast Flow of water.

In the Ultraflo system, house current is reduced to 24 volts by a transformer in the control panel. This safe, low-voltage current is carried from the push buttons to the solenoids that control the valves in a panel near the water heater. When you touch the H or C button, a solenoid opens a valve between the hot or cold water source and the pipe to the sink. Touch W button and both open. As the water flows on its way it goes through a flow control valve. This one has no solenoid control but has been preset at installation time to the rate of flow and temperature desired. A second valve, in another short line paralleling this one, adds to the flow of water when it is opened by its solenoid. This is activated by the fifth button. The OFF button simply cuts the current to all solenoids, closing the valves.

In the lavatory, where fast flow isn't needed, only two valves are required. A tub-shower combination would need two connections between the hot water source and the line to the shower as well as one for the cold water for a choice of temperatures.

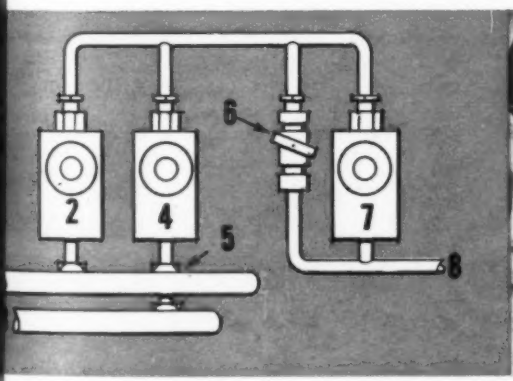
Ultraflo adds a neat and modern note in the home, and the end of washer replacements. It also offers the convenience of pre-set water temperatures and reduces waste of water.

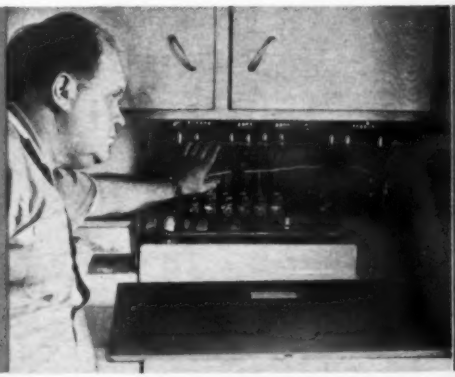
The maker, American Sanitary Manufacturing Co., Abingdon, Ill., estimates that Ultraflo will add no more than $50 to $100 to the cost of a new home. It would cost more in an older dwelling. •

—Darrell Huff

BUTTONS may be placed anywhere within easy reach. At left is a typical bathroom arrangement with a sidewall control panel. Only four buttons are used: Hot, Cold, Warm and Off. At right is a kitchen set-up in which the buttons are recessed in the sink.

HOUSEWIFE pushes five buttons mounted over sink for Hot, Cold, Warm, Fast Flow and Off.





HOT WATER (1) passes through valve (2); cold water (3) through valve (4). Flow control valve (5) regulates flow and temperature of warm water. By-pass valve (6) is always open. Valve (7) opens for Fast Flow to sink (8). Right, typical valve set-up installed in house.

McCAHILL TESTS

PONTIAC offers wide choice of engines and options. Tom's test car had 303-hp engine.

"THIS is a greatly improved road car," reports Tom. The brakes are much better, too.

THE '61 PONTIAC

Performance and good looks, a hard-to-beat combination, make the Pontiac the top car in its class, says Uncle Tom.

By Tom McCahill

I'VE tested Pontiacs so often on Daytona Beach and on coast-to-coast runs that I decided to give the '61 job a go on the west coast, allowing runs through the mountains, across deserts and in traffic tilts at Hollywood and Vine.

Our test car, which we picked up in Los Angeles, was a Bonneville Vista four-door hardtop with a single four-barrel carburetor. Right off the bat, after some rugged mountain descents, I can tell you that the brakes are much better than in former years. Also, there is less body roll around hairpin bends and curves than with either the '59 or '60 models. This is a greatly improved road car.

Much of our testing of the new Bonneville was done on the Los Angeles freeway where the Pontiac can whip out and take command with less effort than it takes to saw through yoghurt. Once in the mountains, the top torque flattens out the steepest grades like a sucker's wallet at Las Vegas.

BONNEVILLE Vista four-door hardtop marks third consecutive year that Pontiac has emerged with brand-new suit. It comes with 14-inch wheels but you can order optional 15-inch rollers for it.

TEST CAR SPECS

MODEL TESTED: **1961** Bonneville Vista four-door hardtop

ENGINE: **V8** cyls.; **389** cubic ins.; **303** brake hp; **425** ft-lbs max torque; **10.25** to 1 compression ratio. Bore **4.06** ins; stroke **3.75** ins. Fuel required: Premium. Standard axle ratio: **2.87:1.** Wheelbase **123** ins; length **217** ins; height **55.9** ins; width **78.2** ins; front tread **62.5** ins; rear tread **62.5** ins. Weight **4,169** lbs. Gas tank capacity **25** gals. Turning circle diameter **46.6** ft. Tire size **8.50X14.** PRICE (without optionals): **$3,040.** PERFORMANCE: 0-30 mph, **3.5** secs; 0-50 mph, **6.8** secs; 0-60 mph, **9.6** secs; 40-60 mph, **4.4** secs. Top speed **117** mph. All times recorded on corrected speedometer.

BUMPER frames a low, rearward slanting trunk and set of triple circular taillights.

MILD fins cap the rear fenders and terminate at the large U-shaped chrome bumper.

RAKISH, slim-line roof eliminates triangular rear side windows on four-door sedans.

The looks of the '61 models have been changed again, which makes it three years in a row without just trying to add feathers to an old hat. The '61 grille is a modernized version of the '59, and the fin and fender line treatment shows some '59 and '60 traces, but the entire package is truly brand-new. Overall length, width and wheelbase plus the highly-touted wide track have all been trimmed for '61. The interior and upholstery are tops in this class of car. The ride, even when I put more air in the tires, was as comfortable as a French featherbed on a snowy night.

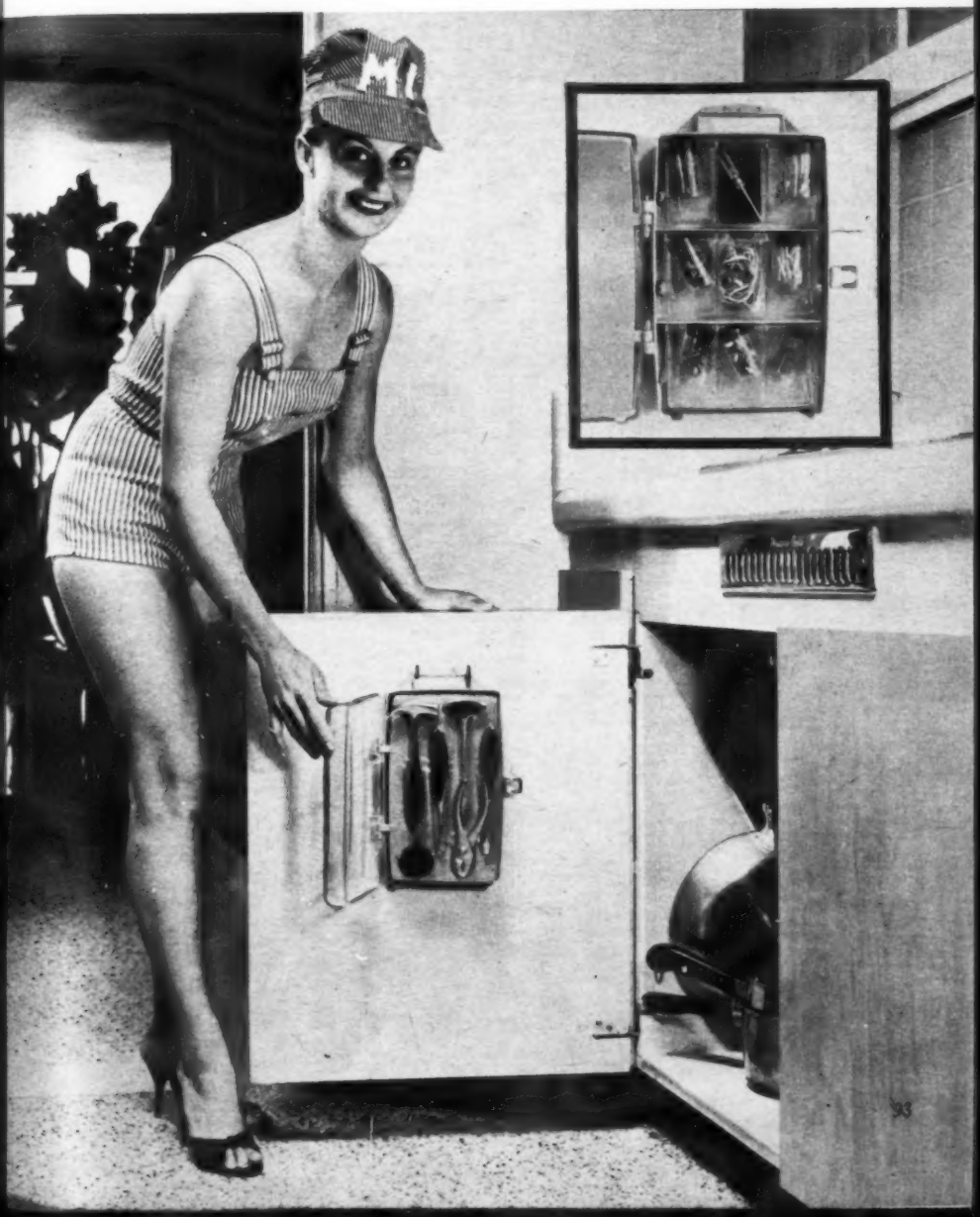
Pontiac features a 14-inch wheel (which I feel is *not* a feature) but you can also order 15-inch wheels and you can even specify a heavy-duty chassis which means tougher shocks and springing. However, the dealer will probably give you a fight on this special order stuff. The reason I say the 14-inch wheel (now almost standard in the industry) is poor is because it cuts deeply into tire life, and with the original equipment tires coming through on all cars today, this can become an expensive item long before the last car payment is made. Oddly enough, in some Workshop Manuals (including Pontiac's) in a little chapter under "Tires" the following statement appears—and I quote the Pontiac manual:

"Common opinion is that inflating the tire above the manufacturer's recommended pressure will give you increased tire life. This, however, is in error, as overinflation can be as bad as underinflation since it not only results in wear at the center of the tread but also makes the tire more subject to casing breaks."

You may note that they didn't say *how much* overinflation. Pontiacs that are used in racing carry at least 65 pounds. However, for the Safari station wagon with air conditioning, Pontiac recommends 22 pounds in front and 20 in the rear. Now, ignoring my opinion, if Pontiac and the other companies are right, then the tire-testing crews with the rubber companies are all wrong and this includes the racing divisions of both Firestone and Goodyear. One of the top engineers with [*Continued on page* 157]

"PRECIOUS," says MIMI, meaning the new LADYfingers Tool Compact for handy hausfraus. Designed by a famous glass and silverware stylist, the kit is made by William Thomas & Sons, Ridgefield, N. J., sells for $20. Chromium-plated steel-and-black-plastic tools come with hardware (inset) in a hang-up-or-carry plastic display case. Compacts come in several decorator colors.

mimi



McCAHILL TESTS....

THE OLDS F-85

In my book it goes down as one of the top compact offerings, says Tom.

By Tom McCahill

THE Lansing leprechauns, known as Oldsmobile workers, have jumped into the compact parade with an entry as hot as calisthenics in a steam room. The F-85, Olds' answer to the new small-car economy craze, is as neat as the larynx in a marble horse—well-styled, functional and a real challenge to big-car buyers.

My test F-85 was shipped to me via Ray Scott's Philadelphia dealership. After the first couple of miles behind the wheel I kept asking myself, "Why does anyone (well, *nearly* anyone) need a bigger car?" Like Buick with its Special and Pontiac with its Tempest, the Olds boys hope that a size compromise between "not too big" and "not too small" is what the public *really* wants.

As any kid old enough to rate a haircut knows, the Big Three have been making regular trips to the bank purely on the strength of their larger offerings. Most of them got into this compact rat race, not so much with profit in mind but as a defensive move—so that they wouldn't be left with the only daughter in town after the last man took to the hills. They would have been a lot happier if the public had just kept on buying their big, expensive-to-operate land barges.

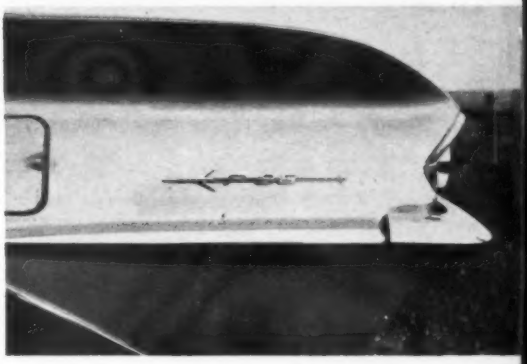
THE F-85 is "well-styled, functional and a real challenge to the big-car buyer" according to McCahill.

TEST CAR SPECS

MODEL TESTED: **Oldsmobile F-85 four-door Sedan**
ENGINE: **V8** cyls; **215** cubic ins; **135** brake hp; **210** ft-lbs max torque; **8.75** to **1** compression ratio. Bore **3.5** ins; stroke **2.8** ins. Fuel required: Regular. Standard axle ratio: **3.23:1.** Wheelbase **112** ins; length **188.2** ins; height **52.6** ins; width **71.6** ins; front tread **56** ins; rear tread **56** ins. Weight **2,695** lbs. Gas tank capacity **16** gals. Turning circle diameter **37** ft. Tire size **6.50 X 13.**
PRICE (without optionals): **$2,175**
PERFORMANCE: **0-30** mph, **4.3** secs; **0-50** mph, **9.4** secs; **0-60** mph, **13.5** secs; **40-60** mph, **7.2** secs. Top speed **96-99** mph. All times recorded on corrected speedometer.

As we've already pointed out, the first offerings from the Big Three camp have already started to grow, either in engine size or horsepower and torque. The 1961 batch of compacts (with the exception of the Valiant-copying Lancer) are all bigger than the '60s. In fact, they would be just about average-size cars, interior-wise, of seven or eight years ago, with about the same horsepower and performance.

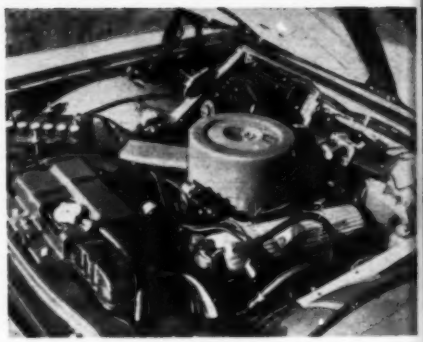
A lot of you will find this hard to believe but hundreds of thousands of dollars have been spent by the manufacturers in an effort to find out what the public really wants. Most manufacturers, admittedly, feel they don't know any more than they did before the sur-



NEW emblem decorates area beneath flared tail. The car also comes in deluxe model.

COMPACT Olds has coil spring suspension. On winding, twisting roads tail is a little light but driver can compensate for this problem.

DASH is neat, easy to read but Uncle Tom thought the front seat was extremely low.



F-85 aluminum V8 mill displaces 215 cubic inches, boasts 155 hp, does 96 to 99 mph.

veys were made.

My theory is the public hasn't a single clue as to what they really want. They're in the market to be sold, not queried. Thousands of buyers have the thought in the back of their minds that they'd like real gas economy attained on cheap fuel—and at the same time (if it doesn't hit the economy too hard) they'd like comfort and reasonable performance. Now all the manufacturers have to do is fill this bill with a package that'll bug their eyes like a kid getting his first bike, plus offering them a few added features such as styling suaveness, a little touch of exclusiveness and an attractive price. See, fellows? That's all you have to do.

The Olds F-85 fills a lot of bills and will be just what many people want, though naturally not all of them. Styled with a wheelbarrow-full of good taste on a 112-inch wheelbase, it hits close to a top compromise between the too-small car and the too-big car. Like Santa Claus, it has a little something for everyone. Its power plant is an aluminum V8 mill quite similar to Buick's Special engine and Pontiac's V8 Tempest model. Basically, all three engines are alike. The blocks are identical but they differ in several minor ways. For example, though the displacement on all three versions is 215 cubic inches, the valve springs on the Olds differ in shape and tension. The pistons are flat-bald versus the fractional-domed jobs on the Buick and Pontiac editions. The heads also differ, as do a few other parts.

None of these [*Continued on page* 158]

DUAL headlights, wide grille mark F-85. It has styling characteristics of big brother.

TWO heads are better than one and they add up to fact that storage space is adequate.

UMBRELLAS without lights are old-fashioned, according to L. Gordon, an inventive Englishman. Gordon, an electrical engineer, uses his umbrella for two purposes—as protection against rain and as a flashlight!

This is what he did to make his unusual umbrella which he calls the Lamp Gamp. He fitted a three-volt bulb in a socket in the end of the handle, hollowed out the lower part of the handle, inserted a three-volt battery and wired it to a switch. And *presto*—he had a light-umbrella!

Gordon claims that all umbrella manufacturers should consider his idea. He says: "It's invaluable on dark nights for glancing at your watch, looking at timetables and fitting keys into your front door and car." •

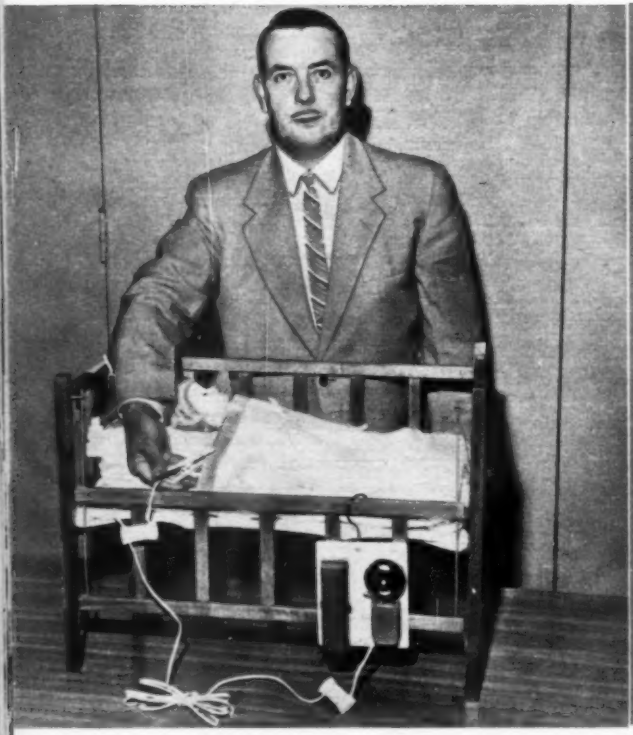
HIDE-AWAY LIGHTS

SNEAKY PETE spells trouble for the unwary motorist. That's the name of this rotating red safety light which is designed for installation on unmarked police cars. The "ghost beacon" is hidden in the fender of the car and pops out when an officer wants to make an arrest or bring a speeder to a halt. Sneaky Pete extends or retracts at the touch of a hand lever on the dashboard of the car. Once the red light has been hoisted, it can be seen only too clearly by offending motorists.

The inventor of this hide-away blinker is Howard Walton of Clermont, Fla. He claims that his signal light is adaptable to all law enforcement vehicles and also for boats. He could be right. The next time you take to the road—beware of Sneaky Petes! •

GENIUS ON DISPLAY

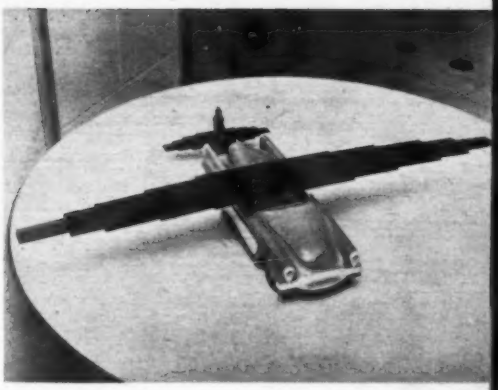
INVENTIONS—over 200 of them—were on display.



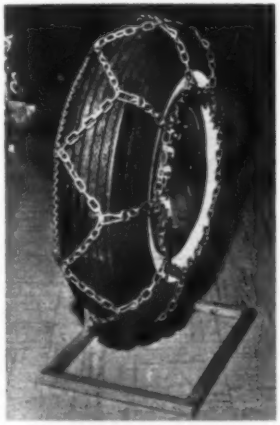
BABE ALARM dreamed up by inventor Dermont B. Crafts of Auburn, Me. features snap-type electrical connections at alarm and blanket. If restless youngster becomes uncovered, the alarm rings for mama.

MORE than 200 inventions which have never been manufactured or marketed were displayed at the National Invention's Exhibition and Creativity Conference sponsored by the Cleveland Engineering Society. The conference was designed to promote invention, research and business by bringing the principals together. Some of the genius displayed is shown here. •

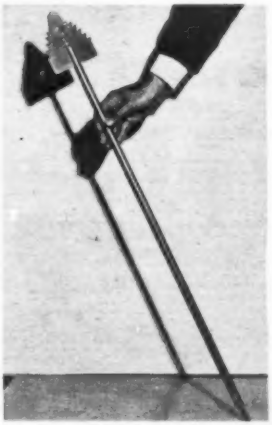
DRAFTLESS circulator provides fresh, clean air without disturbing people or objects.



TELESCOPING wind and tail section for flying car by Thomas F. Gibson of Cleveland.



ANTI-SKID, continuous traction tire chains invented by A. B. Clark, Amarillo, Texas.



LONG DRILL of John Stacheri, New Britain, Conn. bores fishing holes in ice.

FILE machine rotates to left or right via electric motor. Note the hand lever control.

ILLUMINATED carpenter's level, designed for clear reading of tubes. Forrest D. Coombs, Westwood, Mass.

WHEEL arrangement for hand-propelled carriages facilitates going up or coming down a curb or stairs.

FINISHED ROOM has pine-paneled walls, tile floor, window seat, built-in TV and a furnace

GARAGE TO

Here's the formula for raising property value (and teen-agers) in one fell swoop!

By Gordon P. Manning

AS PARENTS of one or more teen-age children will agree, adding a rumpus room to the home will sooner or later become a positive necessity. For youngsters of this age need space—plenty of space—and away from the family if possible. And by providing them with a room where they can entertain their friends, you will not only don the halo of a loving papa, but will also free yourself from the need for tranquilizers or a sound-proofed den.

In our own case, some unused garage space—an area of about 15x20 feet—in the back section of the house proved perfect for the purpose we had in mind. After renovation this space accommodated a window seat with locker space, a built-in TV and a large game and utility closet. It also provided us with a 4x20-foot back hall that was badly needed. The only problem of any consequence we encountered was raising the floor three feet from ground level to make it even with the rest of the house. This entailed a little concrete block work to level off the new floor with the old.

The entire conversion job cost remarkably little. Expenditures from start to finish for both the room and the hall totaled only $1,250. And this covered not only the carpenter's labor, materials, insulation, floor tile and wiring, but the cost of a small gas floor furnace as well. If you have the time and talent you can do the carpentry work yourself and save about $400, thus cutting the cost of the job.

We paid $55 for the vinyl floor tile. The double-thick batt insulation for the walls cost us $57. I picked up three used

installed under the floor. Total cost of $1,250 included a hallway (not shown).

RUMPUS ROOM

doors for $27.50 and a couple of big window frames for only $20. Used sash and doors are real money savers on alteration jobs and should be sought out whenever possible.

We used knotty pine on the walls, and this item amounted to $175. It gives a sturdy, marproof finish that is essential in a room of this type. Under the tile flooring we laid a ¾-inch-thick Plyscord floor at a cost of $83. The acoustical tile installed on the ceiling has proven a real sound-snuffer and was more than worth the $48 it cost us. The job was finished by a licensed electrician who wired the whole area for $47.

Here, briefly, is how we did the job:

Working from an accurate drawing of the entire conversion job, we began by setting up three concrete block piers for the floor girder. This girder, built up of two 2x8's, was run the full 16-foot-length of the room. On one side of the room we had to lay up a short wall of concrete blocks to close off the old garage door opening.

We then spiked 2x8's between facing

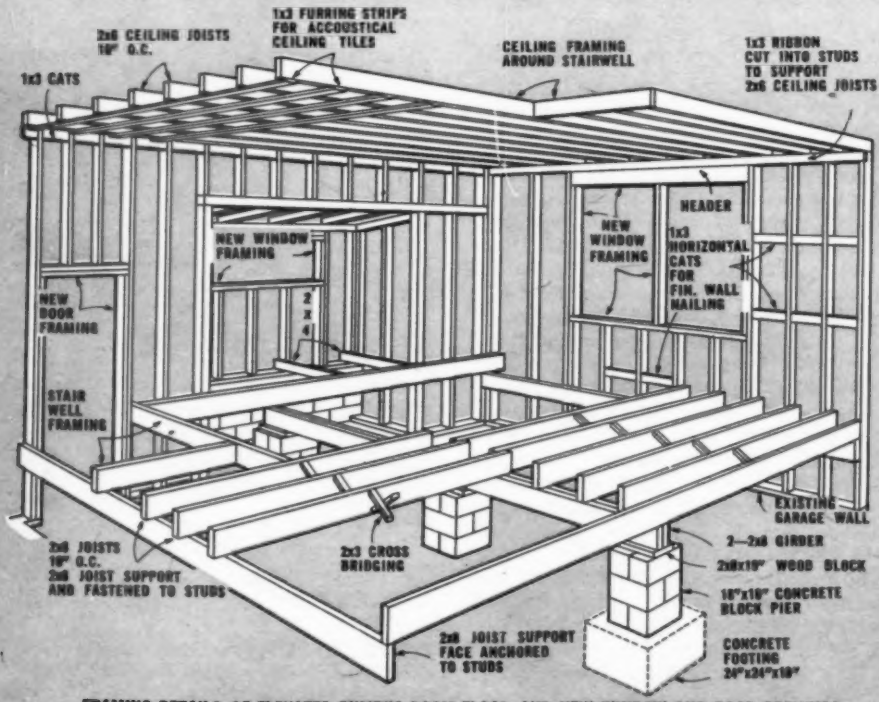
SELECT WINDOWS that help annex appear as a natural extension of the main house.

GARAGE attached to rear of house looked like this before converted to rumpus room.

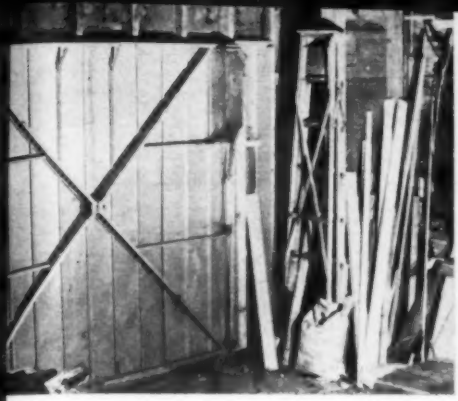
WINDOWS from an old schoolhouse were installed along the south wall of the room.

walls to provide nailing for the floor joists which were ten feet long and spaced 16 inches on centers. Their other ends rested on the girder in the center of the room.

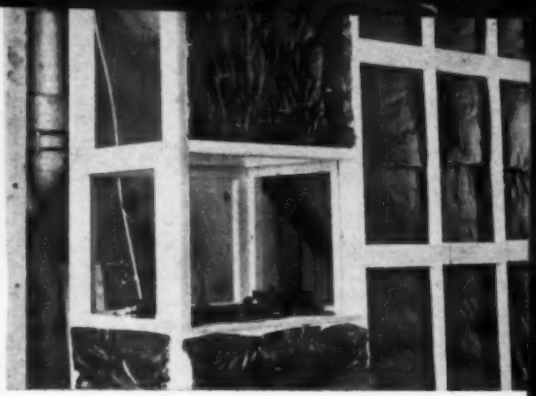
As soon as the joists were in place we bridged them, then cut the openings for the hall stairs and the floor furnace. Next, the ¾-inch Plyscord floor was laid. This went quickly because we had



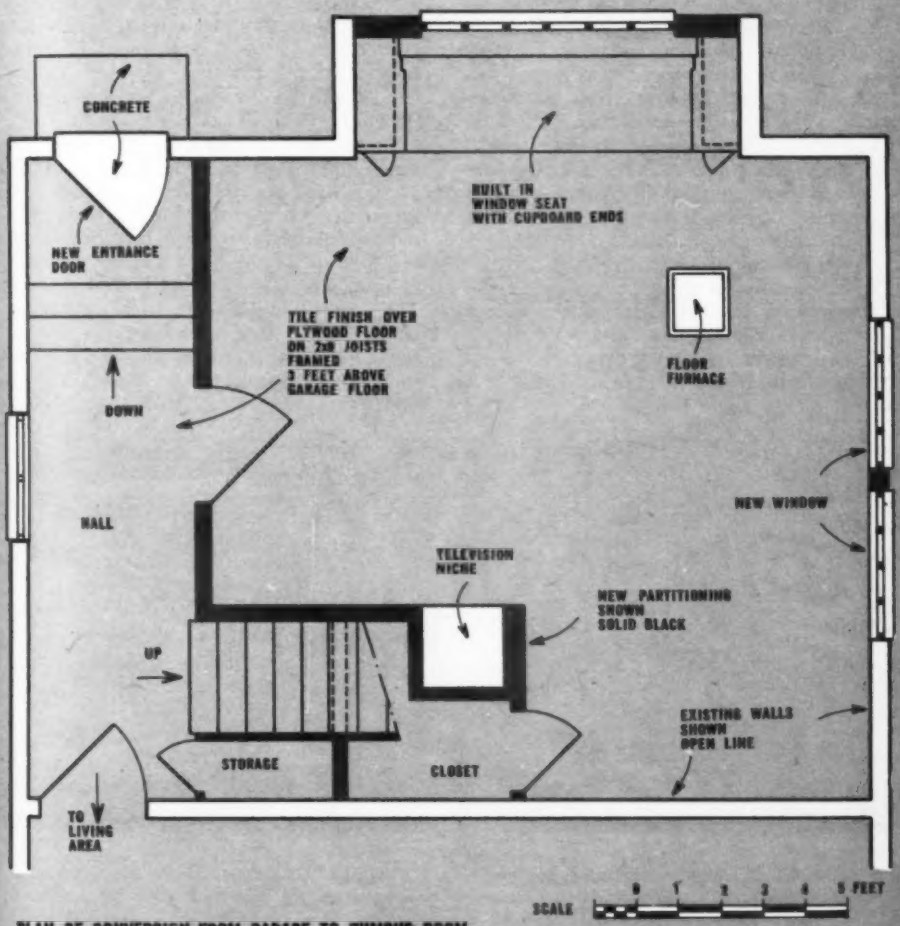
FRAMING DETAILS OF ELEVATED RUMPUS ROOM FLOOR AND NEW WINDOW AND DOOR OPENINGS



INSIDE, the unused garage had become a storehouse for junk of every description.



INSIDE WALLS were covered with double-thick batt insulation. Note open TV niche.



PLAN OF CONVERSION FROM GARAGE TO RUMPUS ROOM

PLYSCORD FLOOR was covered with felt over which vinyl asbestos tiles were laid.

SMALL GAS FURNACE was recessed in the floor and covered with a vented register.

previously calculated the spacing so that hardly any cutting was necessary.

Since two of the existing walls were badly out of plumb, we set up new studs on a level plate leaving ample space between them for the insulation. The new 2x6 ceiling beams were run the length of the room. As soon as the interior partitions were up, the 1x3 furring strips for the acoustical tile ceiling were nailed to the ceiling beams.

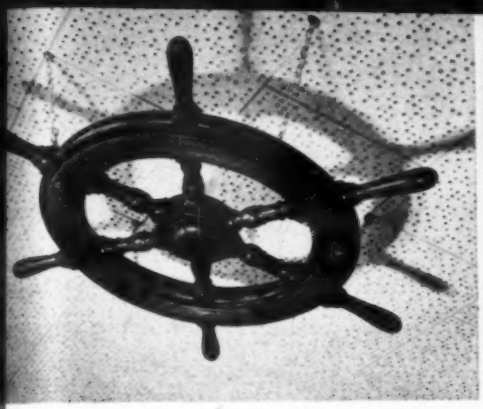
We next framed in the game closet and the television opening under the stairs and installed the double-thick batts of insulation in all the walls.

The following day we put the portable circular saw to work cutting the openings in the south wall for the two big windows. Frames and sash were installed and the area around them packed with insulation. The sash measured about 25x66 inches and was made up by a local mill for $11.

After the horizontal cats were in place, the knotty pine walls were nailed on. We used boards of eight-, nine- and ten-inch widths and achieved the informal effect we desired by installing them at random. With the walls up, the tile ceiling was quickly stapled in place. This was a cinch. The tiles measured 12x24 inches and fastened on easily. A two-inch cove molding finished off the joint between ceiling and walls.

WINDOW SEAT and lockers span the length of the room's sunny, wide-windowed alcove.

TV NICHE under the stairs has a duplex receptacle and lead-in for the TV antenna.

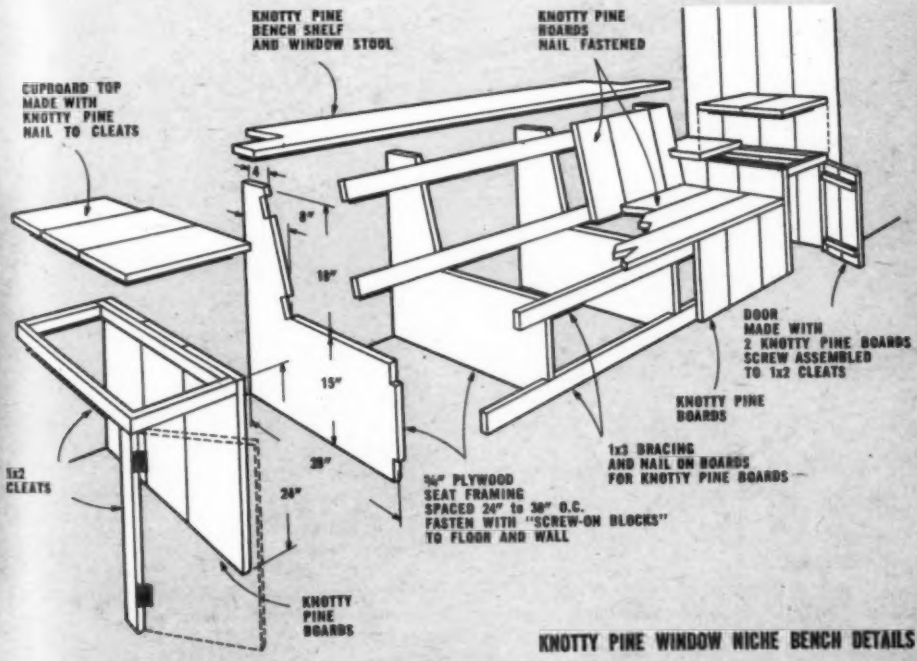


OVERHEAD LIGHT was fit into the ceiling fixture—a ship's wheel suspended by chains.

BUILT-IN LOCKERS at either end of the window seat offer plenty of storage space.

The vinyl asbestos floor tile was then laid over heavy felt. We estimated the quantity of tile by first making a scale drawing of the floor space to be covered. All that remained was to finish up the new back hall in the same manner using the same materials.

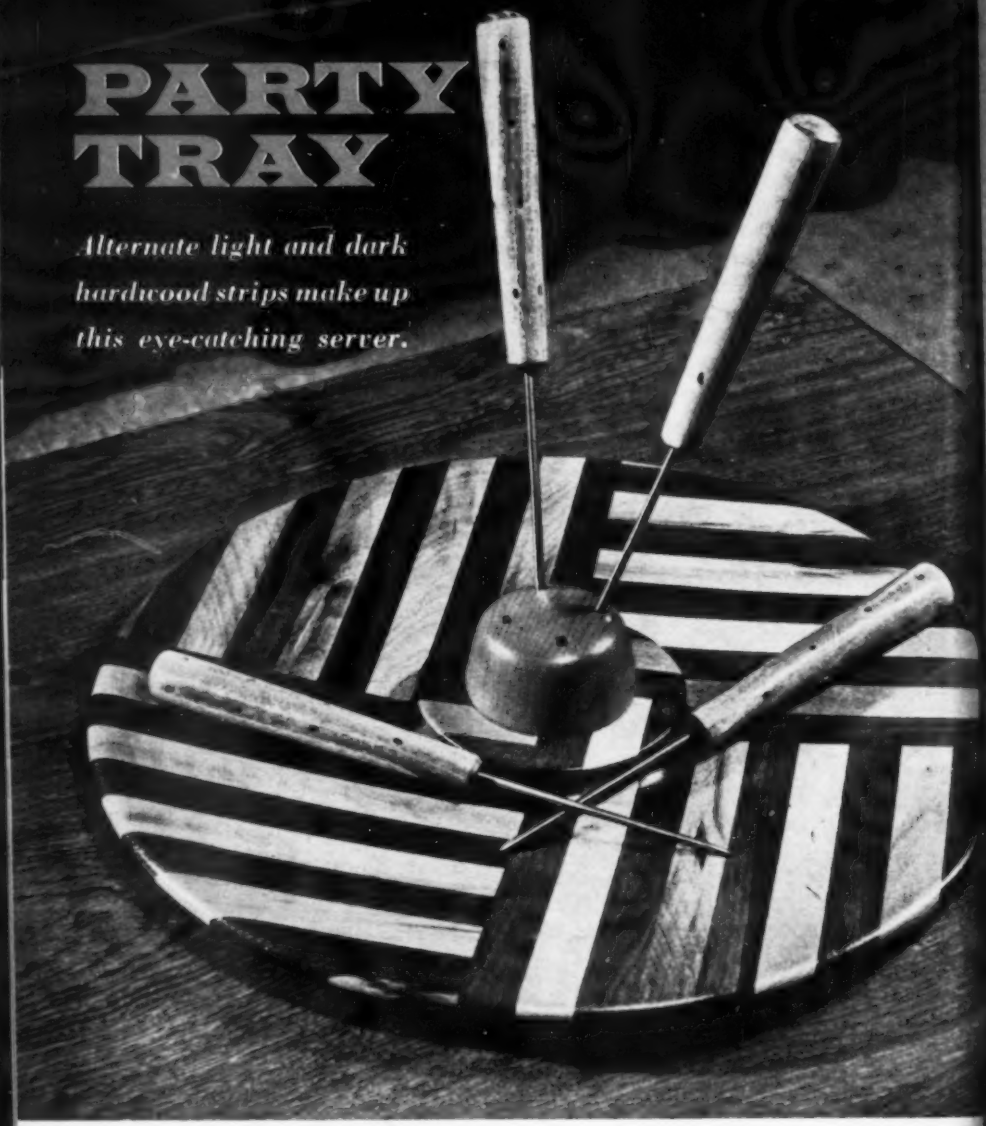
The time spent on this conversion job totaled less than 158 hours. Although we have been enjoying the room for only a few months, we feel it is one of the best investments we ever made. Try it yourself—we think you'll feel the same. •



KNOTTY PINE WINDOW NICHE BENCH DETAILS

PARTY TRAY

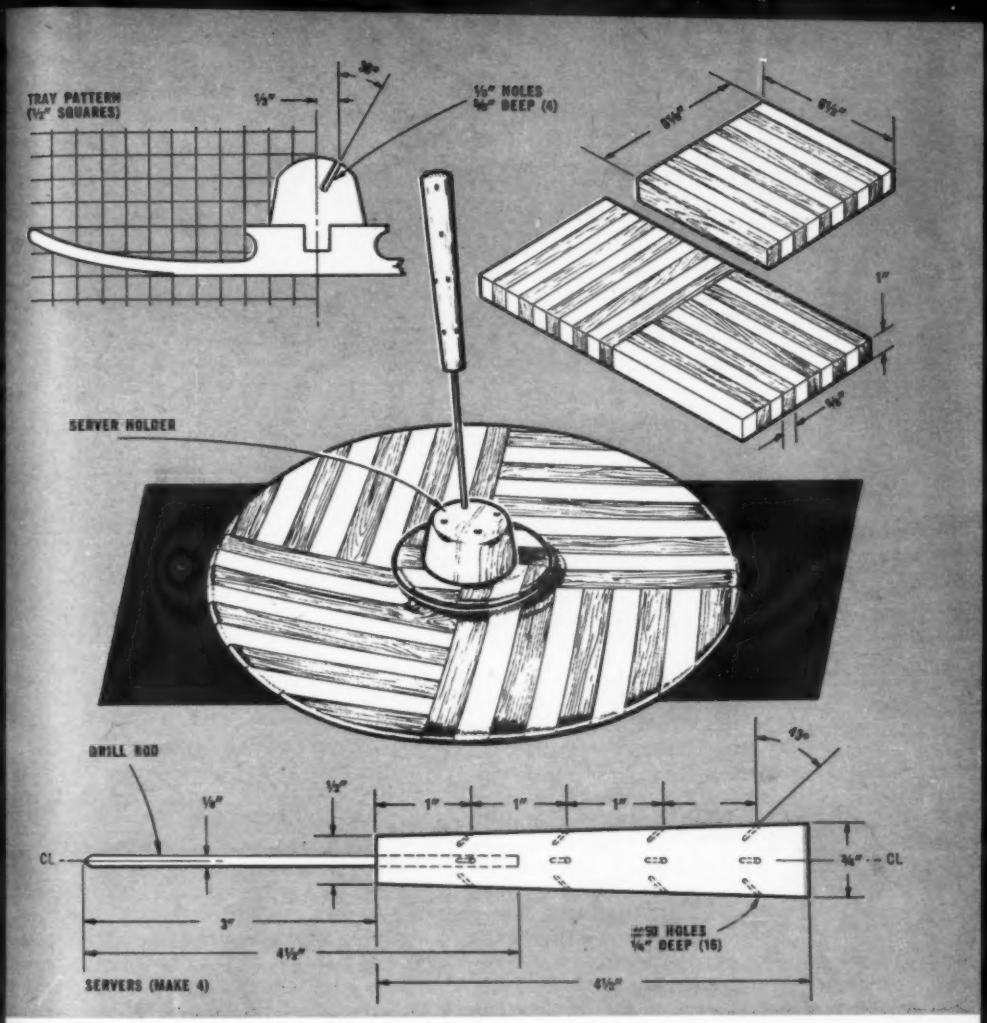
Alternate light and dark hardwood strips make up this eye-catching server.



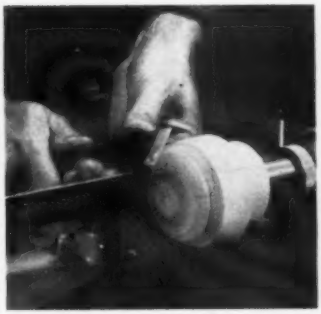
By R. J. De Cristoforo

ONLY painstaking inlay work rivals the beautiful effects obtained by turning glued-up blocks of contrasting woods. This tray is a good example of the artistry that can be achieved with the latter technique. Using maple or birch with walnut or mahogany, for example, will provide the pronounced color contrast best suited for this project.

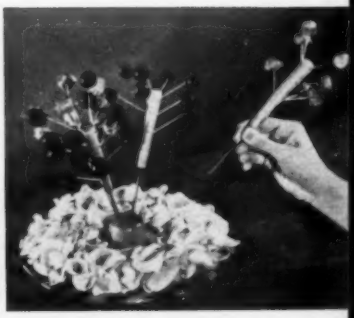
Start by cutting ten ⅝x1x24½-inch strips of wood—five light and five dark, then glue and clamp them together as shown in the drawing. Twenty-four hours later (when the glue has dried), cut this laminated board into four equal squares, then glue these together as indicated and [*Continued on page* 156]



BASIC assembly of hardwood strips is glued and clamped.



MAPLE server-holder knob is turned to shape on the lathe.



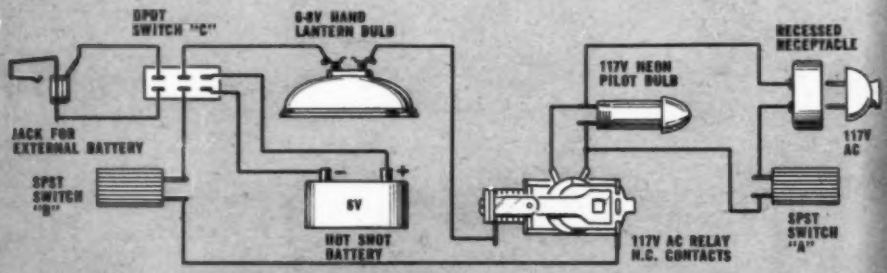
NOW olive "trees" sprout on an island of goodies.

EMERGENCY LANTERN

It lights automatically if there's a power failure at home and also operates off an external battery.

THIS versatile lantern meets many needs around the home and on the road. Unlike most hand lanterns, it is never idle. Stored on a shelf with a 117-volt line cord plugged in, it immediately lights if there is a power failure. When the need occurs, the line cord is unplugged and the lantern is ready for portable use. It then operates off a self-contained, six-volt Hot Shot battery that will give many hours of useful life. If the lantern is to be used for long periods of time, you can throw a switch and connect it to the car battery or any six-volt battery.

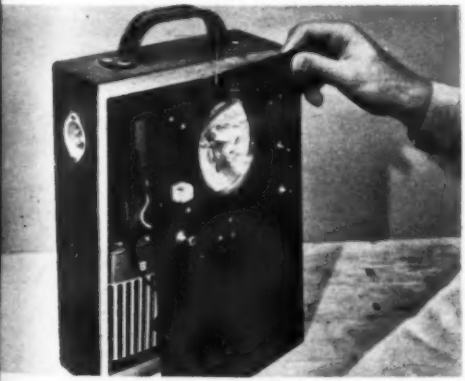
The case is easily built, starting with the sides, top and bottom. These pieces are half-inch white pine, butted and se-



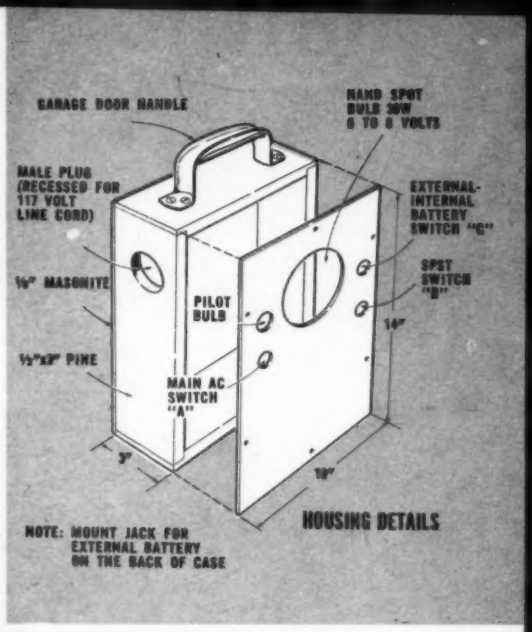
WIRING DIAGRAM

SOLDERING the leads to the relay. Note strips of strap iron holding lantern bulb.

RECESSED receptacle for 117-volt line cord is mounted on the side of the case.



COVER, with the bulbs and switches installed and wired, is screwed to the case.



HOUSING DETAILS

cured with waterproof glue and wire brads. The front and back panels are eighth-inch tempered Masonite, secured at the rear with waterproof glue and wire brads and at the front with round-head wood screws. A large garage door handle attached to the top makes it easy to carry the lantern, even if you're wearing heavy gloves.

The 117-volt AC line is plugged into a recessed receptacle on the side of the case. When the main AC switch is thrown, the pilot light goes on and the relay coil is energized. This will prevent the lantern from being lighted. In the event of power failure, the relay is not energized and the lantern will turn itself on. Switch C permits the lantern to be used with an external battery.

—*Robert J. Mouser*

BILL OF MATERIALS

1	Recessed receptacle	Amphenol #61M10
2	Switches (SPST)	Cutler-Hammer #8280-K16 or similar
1	Switch (DPDT)	Cutler-Hammer #8363-K7 or similar
1	Pilot light (100-V)	Drake #105
1	Relay (110-V, Normally closed)	Potter & Brumfield #MR11A
1	Jack	Phone type for external battery connection
1	Lantern lamp bulb (6- to 8-V)	Hand spot type, Westinghouse or similar
1	Battery	6-V Hot Shot type

In our December issue we described the construction of the two stereo speakers shown above. We continue with the construction of the two center cabinets for housing an AM-FM tuner, stereo amplifier, turntable and a television set.

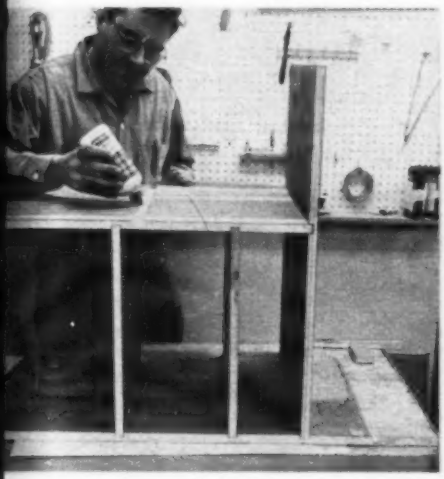
CABINETS FOR STEREO COMPONENTS

THE two center cabinets shown in the photograph above are companions to the stereo speaker enclosures featured last month. Constructed of richly grained walnut, the right center cabinet houses the turntable, tuner, amplifier and

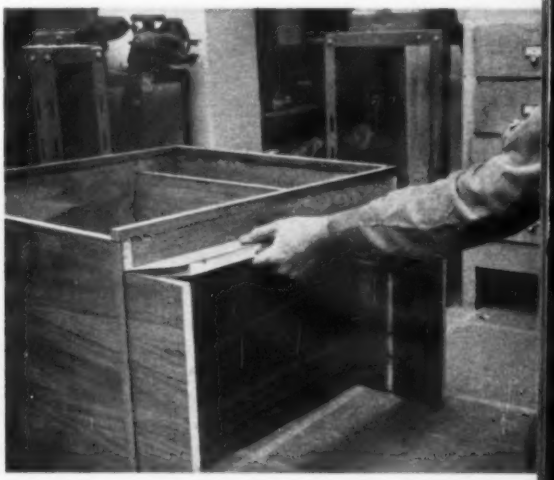
two record storage compartments. The other cabinet is built to take any standard TV table set.

Basically, construction is similar to the two speaker enclosures described last month except that doors are included. Start by laying out the various sections on a panel of 4x8 ft. walnut plywood. Choose the better grain patterns for the doors. Try to match both sets of doors as closely as possible. Allow at least a half-inch extra in the layout for final cutting. If you use a saber saw for the rough cut, work from the back side of the board because the rougher side is toward the operator.

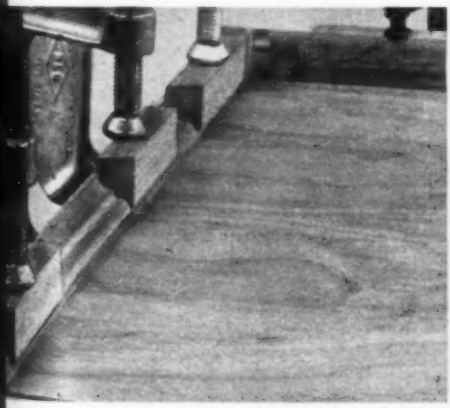
In some cases you may wind up with two non-parallel sides. If so, nail a 1x2-in. strip of wood along the fence side. Another use for the cleat is when you can't move the fence far enough away from the blade. In this case, nail the



CHECK the fit of the shelves and the sides before applying glue to joints.

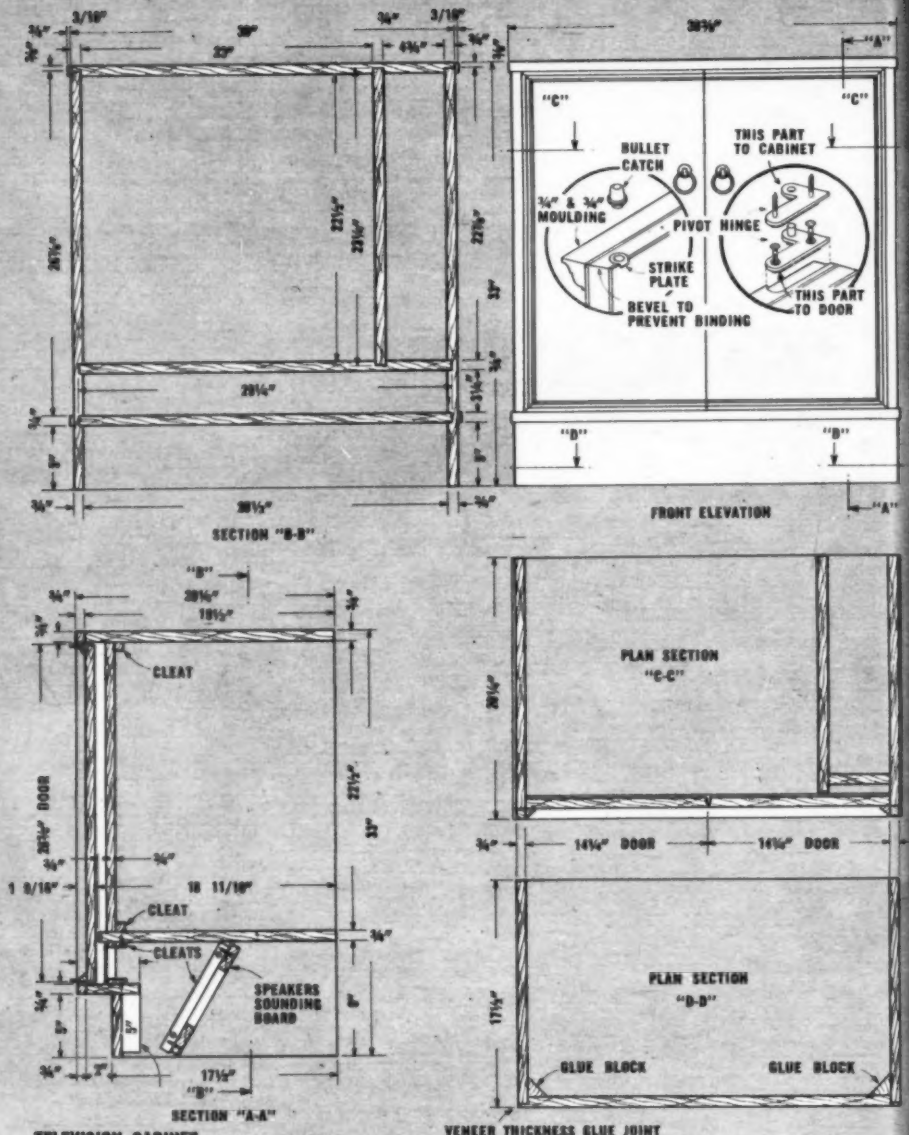


FITTING TOEBOARD. Note board is rabbeted up to veneer to eliminate raw edge.



HOW SCRAP pieces of molding are used to obtain a parallel clamping surface.

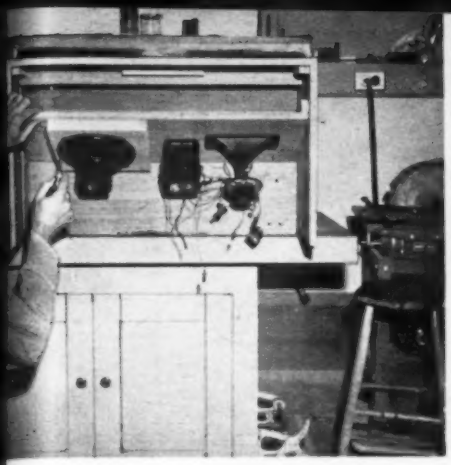
STRIPS of solid walnut are glued and clamped to the faces of each cabinet.



TELEVISION CABINET

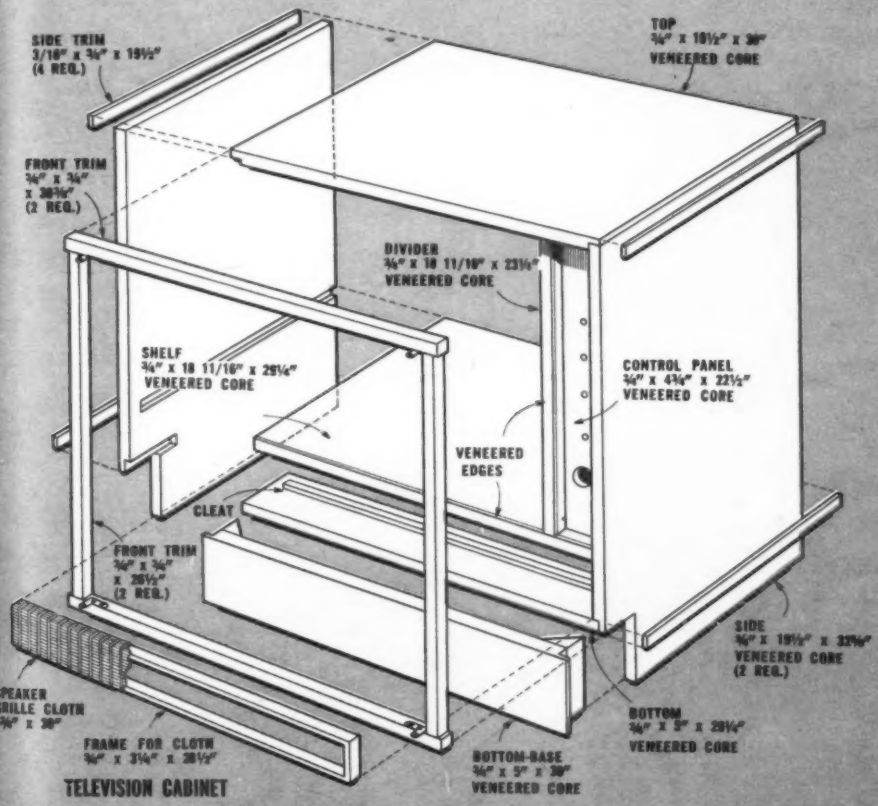
cleat on the underside of the board in the proper position and use this as a "fence" by riding it along the table edge.

Cut all dadoes and rabbets as shown and identify each part to avoid confusion when assembling. Before making the cuts in your panels it is advisable to make trial cuts in scrap pieces to insure a perfect fit of parts. When making dado cuts for the partitions and shelves, start



JENSEN high fidelity speaker and tweeter is mounted in the base of the TV cabinet.

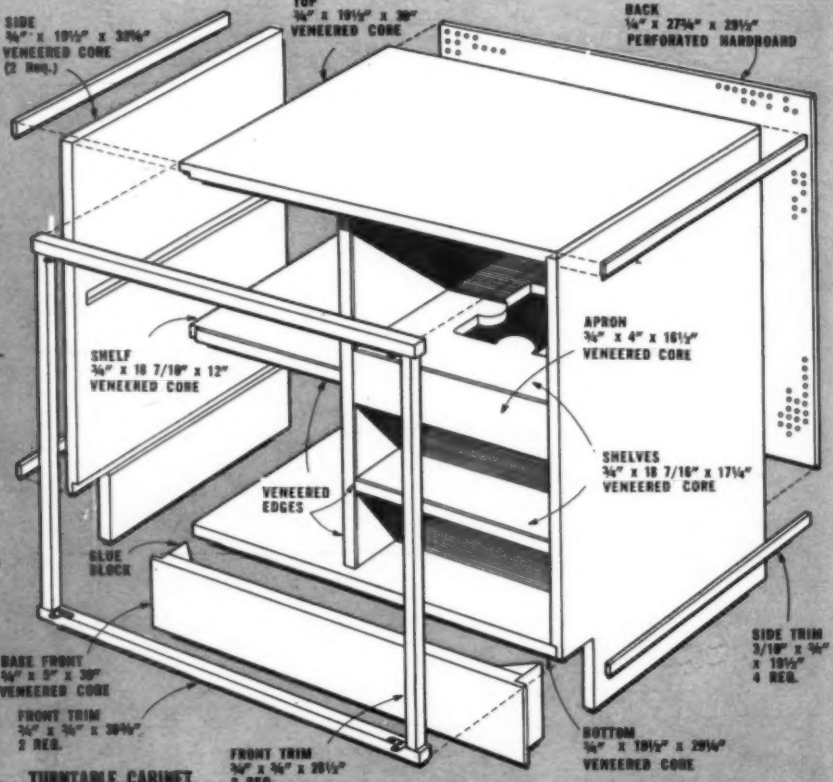
SPEAKER CLOTH is mounted on 1x1-in. framing, held in place with cleats at rear.

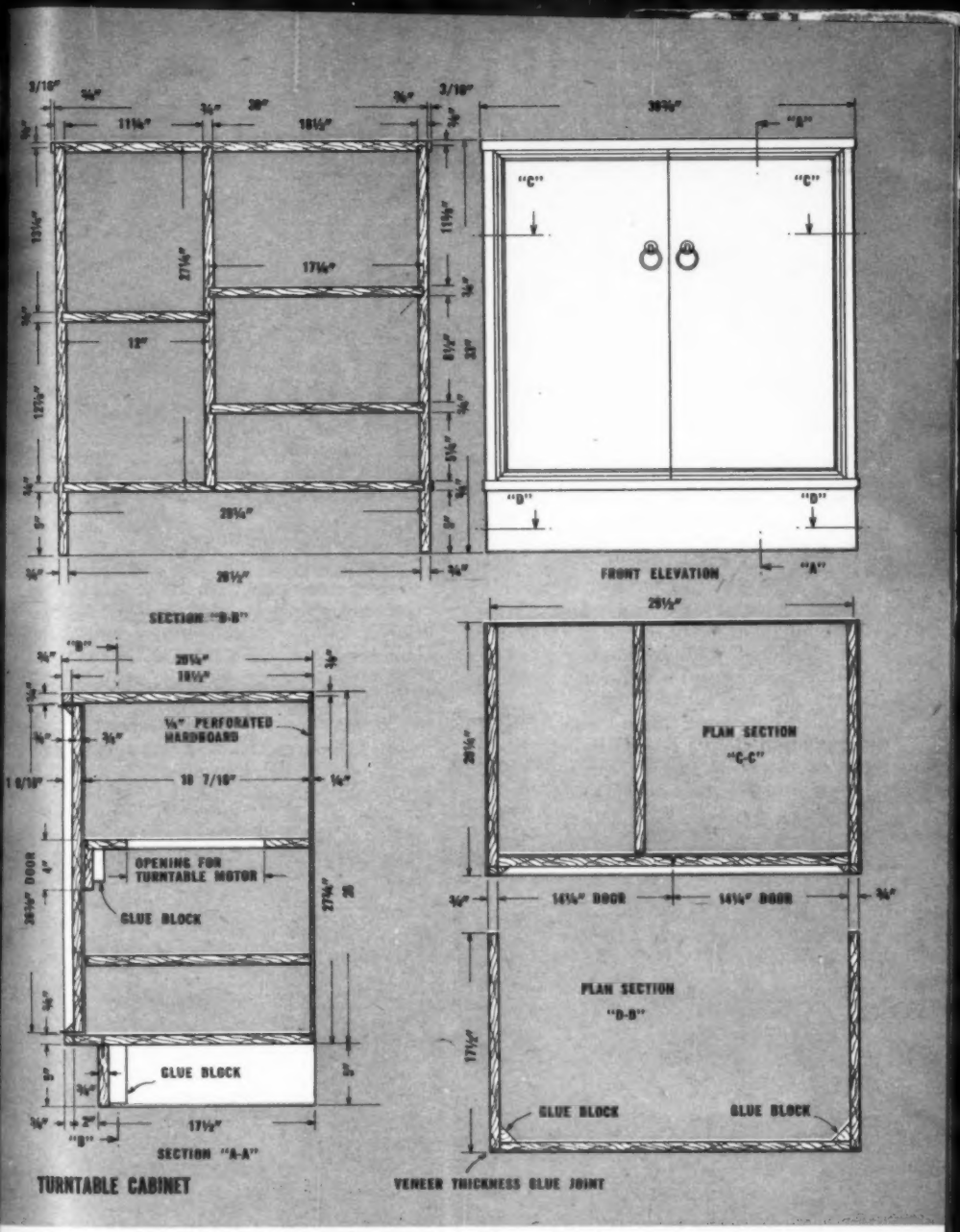


TELEVISION CABINET

AFTER STAINING and lacquering, the finish is given a good rub-down with paste wax.

INSTALLING the Knight AM-FM tuner. Stereo amplifier in center delivers 34 watts.





TURNTABLE CABINET

the cuts from the rear edge of the panel since a blind dado is made in most cases, stopping slightly short of the front edge. Shelves and partitions are notched as shown so that parts will mate. Remove all burrs with sandpaper and glue securely.

If you don't plan to use the Jensen speaker system illustrated for the TV set, you can utilize the available space

REAR OF COMPONENTS cabinet is covered with Masonite. The cut-out is for ventilation.

SLIDING TV set into place. It is a 17-in. RCA table model. Cabinet back is open.

for some other purpose such as additional record storage or, perhaps a secret hiding place for your "cough" medicine. In addition to the speakers, the cabinet features jacks and a volume control for earphones and a hearing aid.

The component cabinet was designed to accommodate a Rek-O-Kut turntable and arm as well as a Knight FM-AM tuner and stereo amplifier. The record shelves are open without separators as the cubby hole type of separator seems to be good only for collecting dust. Open shelves are easier to clean.

A word of caution when using glue—keep it off the "finish" surfaces because all glue stains. If you use the fast setting white glues wipe off excess with damp cloth. Note that the turntable board is glued with the [*Continued on page* 156]

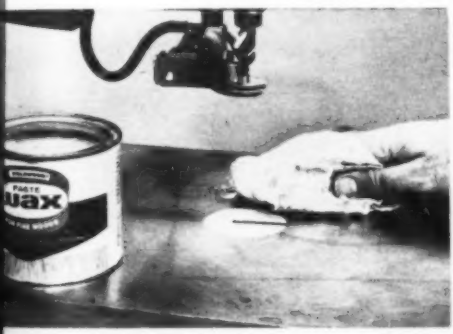
COMPLETED components cabinet showing installation of Rek-O-Kut turntable and arm.

COMPLETED TV cabinet. Auxiliary switch at right kills sound. Note earphone jacks.

HOME HINTS

SMALL rug under furniture makes it easier to move on hard floor; protects floor too.

DOLLY for easy moving of large panels is made from a caster, a 2x4 and sheet steel.



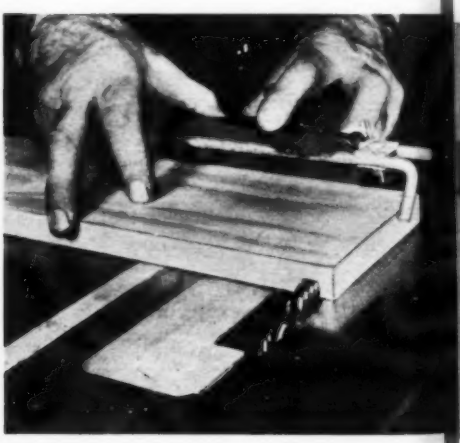
SAW TABLES remain smooth and rust-free if given an occasional coat of paste wax.

BAND-AID container hung on tool board is a good holder for pencils, rule, etc.

BURNING a match, safety or kitchen type, will mask undesirable odors in bathroom.

HIDDEN VANITY

TENONS are cut by clamping sides to jig made by half-lapping two pieces of stock.

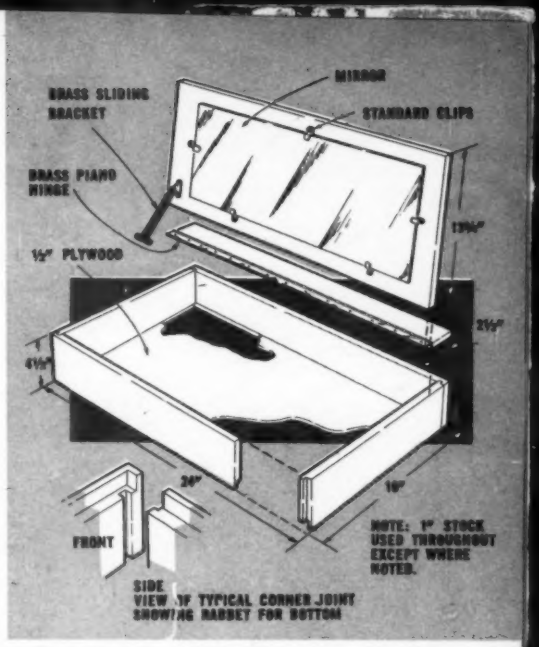


MORTISES are uniformly cut in front and back by using stop bar on crosscut gauge.

BOX

Beauty aids don't beautify a dressing table. Put them away in a neat vanity box.

By Ralph Bosun



COSMETICS in jars, vials and all sorts of dispensers often accumulate on a dressing table to create an unsightly array. An excellent solution for this disorder is a built-in vanity box with a lid that doubles as a mirror support when it is raised to expose the beauty aids.

Designed to be attached directly to the wall or mounted between chests of drawers, this vanity box will hold all small items such as nail polish, rouge, lipsticks, perfumes and cream jars. Only tall bottles have to stay out because the depth must be limited to allow knee room below and keep the mirror at a practical height above.

Easily constructed as illustrated, the box can be finished to match the adjoining furniture or covered and lined with white sheet plastic. The plastic, bonded to the wood with Contact Cement, will prove attractive and practical.

For mounting between two chests, the simplest way is to remove the top drawers in the chests and drive screws through the sides and into the sides of the vanity box. Another way is to secure the vanity box to cleats attached to the sides of the chests. •

GLUE goes in joints. Note ¾-inch rabbet along bottom edge for plywood panel.

PIPE CLAMP pressure is used until glue sets. Blocks under jaws protect surfaces.

CAR CARE

WINTER STARTING

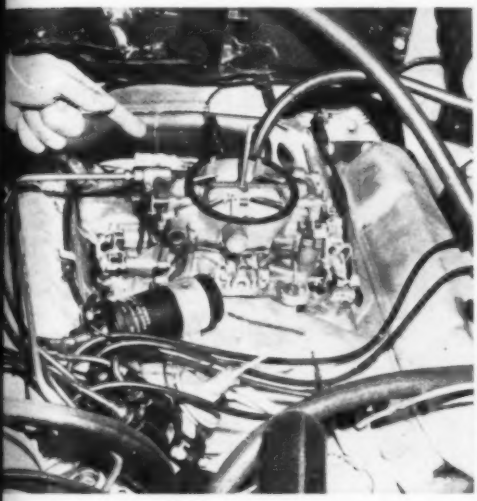
By Frederick C. Russell
Member, Society of Automotive Engineers

HOW to remain calm and collected when the engine balks on a cold winter morning is simple enough if a few tricks are known—and it's even better to take precautionary measures which make it less likely for the engine to put on a mule act. Human nature and automobiles being what they are, however, the problem usually resolves itself into getting caught and then trying to fight through to a start.

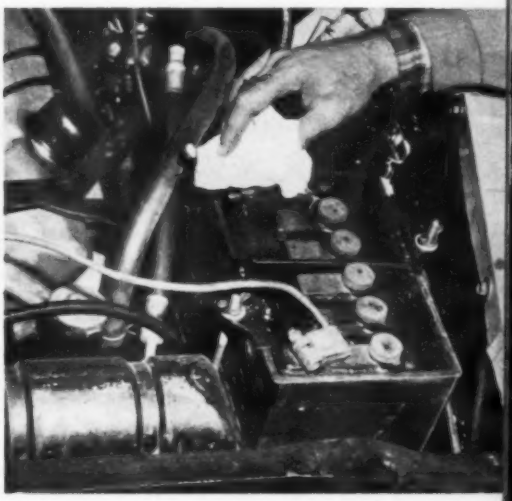
Sometimes getting started is nothing more complicated than going back into the house for another cup of coffee while the battery recovers enough to crank faster. Or it may mean removing three of

BE SURE air cleaner isn't cramping the automatic choke control; if so, adjust it.

AFTER FLOODING, wait; then crank with accelerator fully depressed to open choke.

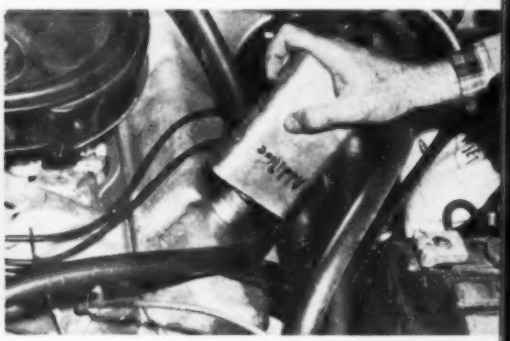


ENRICHING choke coil adjustment one degree may help when cold start has failed.

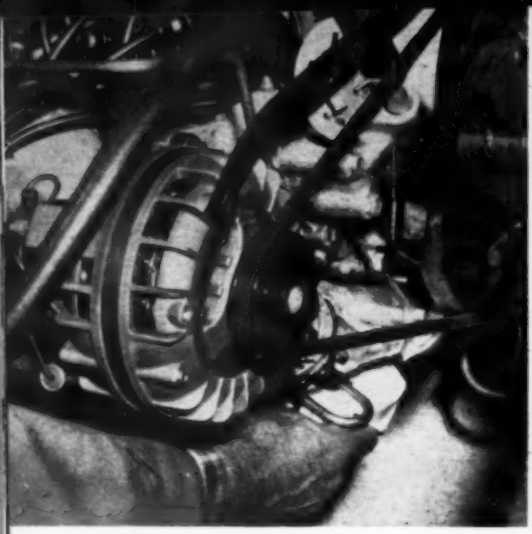


CORROSION cuts down battery efficiency, so be sure that terminals are kept clean.

PLUGS may need cleaning since more oil is sucked past worn rings in the winter.

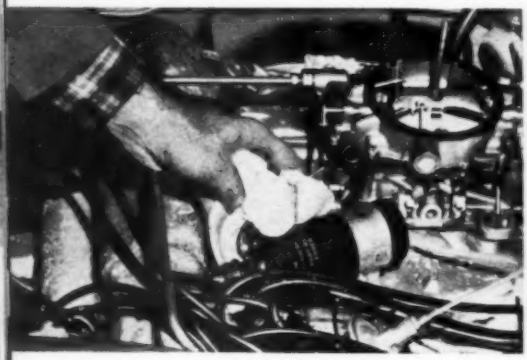


ADDITIVE increases cranking speed if a light or multi-viscosity oil is not used.

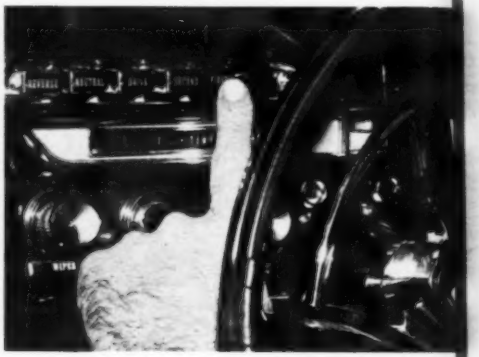


WIPING fuel filter bowl. Low fuel supply allows condensation and ice to form.

CHECKING the timing. Also keeps points, plugs and fuel-air mixture on the button.



PREVENT high tension current flashover by keeping ignition parts clean and dry.

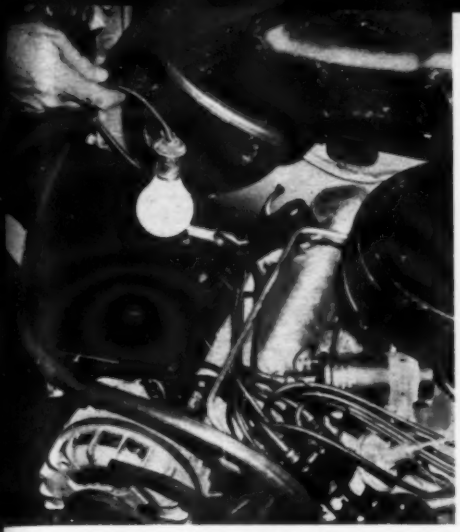


TO PUSH-START automatic, turn ignition on, press Low button and step on the gas.

eight spark plugs to reduce cranking resistance enough for a weak battery to spin the engine to a start. After running the engine for a minute or two, the three plugs can be replaced and another start will be successful. For motorists with two cars, there's always the convenience of hooking up two batteries in parallel to increase the amperage rather than the voltage. Even a 6- and a 12-volt battery can be hooked in parallel if you're careful to have all lights and accessories off during the cranking boost.

One thing to remember about batteries is that a 12-volt job can discharge itself easier than the 6-volt variety if the top is wet or even damp. The higher voltage increases electrical pressure between the battery posts and that means more inclination to discharge. For any battery, more cranking stamina is assured if the cell solution level is kept lower during cold weather. Never add water to the cells before garaging the car. Do the job after the engine has been running and just before you plan to add a reasonable amount of mileage.

To help a weak battery, cranking speed can be increased by pouring a can of oil additive into the engine. Cranking



EXTENSION LIGHT left on all night under hood will help to keep things warmer.

speed is stressed because it has been proved that an engine will start at way below zero if its crankshaft can be spun fast enough to build up compression. The trouble is that too often the battery is sapped of its energy cranking the engine and hasn't enough left over for hot ignition. It takes three ingredients for a start: a rich mixture, good compression and a hot spark. You can't have the right mixture unless the choke is working properly so let's keep in mind that this unit usually fails because of a leaky heat tube. Cold air getting into the tube causes condensation and the moisture corrodes the thermostatic coil which controls the choke valve, thus preventing the valve from closing. These tubes are easily replaced and you can buy improved ones which resist leakage. If the choke is suspected of failure, you can take off the air cleaner and close the choke manually.

Where cars are kept outdoors or in a damp garage, a normal start often can be had by wiping condensation from the coil, the distributor cap and the tops of the spark plugs. Moisture on exposed ignition parts causes flashover of high tension current. There are spray coatings to help protect these parts but if they have become wet from heavy rain or drifting snow, drying can be speeded by spraying [*Continued on page* 154]

SERVICE TIPS

from Detroit

Oil level recommendations for 1960 Plymouth and Valiant TorqueFlite "6" transmissions are changed as follows: The level should be at the Full mark when cold and between the Full mark and ⅝-in. above it at normal operating temperatures.

* * *

The 1961 Buick Special, which has the new automatic transmission, can't be started by pushing. If the battery won't start it, install a fully charged battery or use a jumper circuit from another charged battery. Models equipped with Synchromesh transmission may be started by pushing.

* * *

Fuel starvation in 1960 Thunderbirds and Falcons may be caused by swelling of the flexible fuel line at the fuel pump. If so, the flexible fuel line should be replaced.

* * *

Use caution when raising a 1960 Plymouth with a floor jack. Locate the jack only under the rear axle housing or under the front suspension lower control arms. Never use the jack on any part of the underbody.

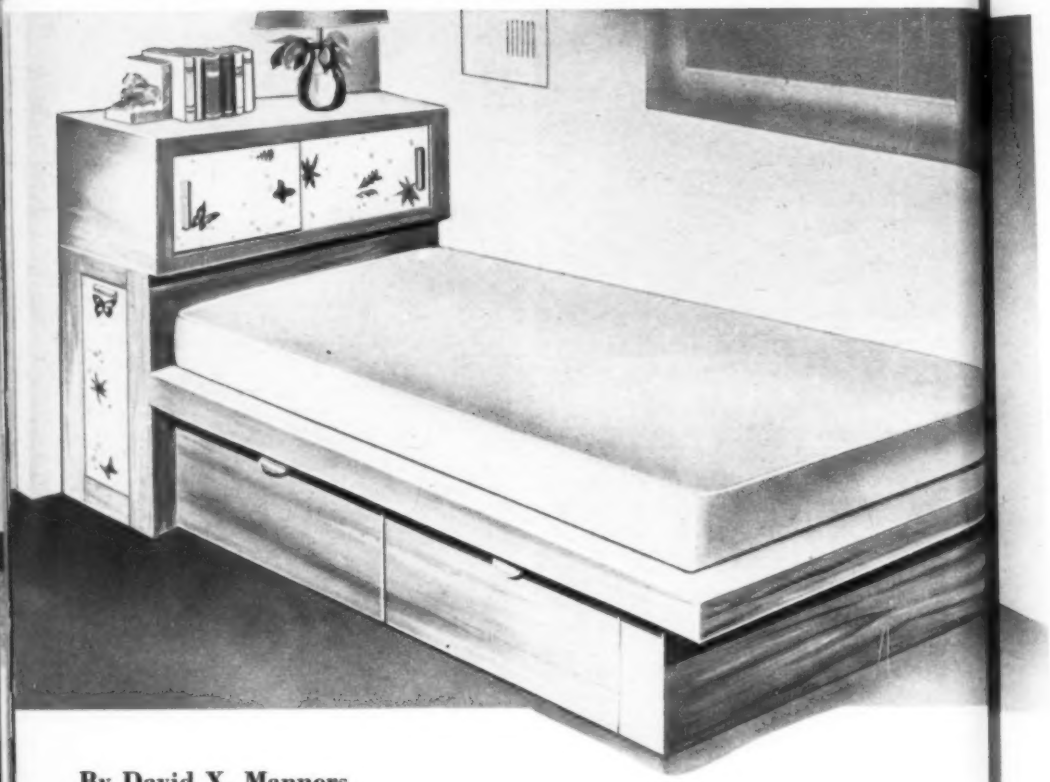
* * *

A change in the distributor oiler used on 1960 Buicks could cause proper servicing to be overlooked. Early distributors had an obvious oiler standpipe; later models have a not-so-obvious oiler located below the base of the distributor cap. Add SAE 10W oil sparingly every 1,000 miles.

* * *

In 1960 Chrysler and Imperial cars equipped with an alternator, excessive ammeter pointer flutter accompanied by flickering headlights or interior lights may be caused by high resistance (corrosion) in the field circuit to the alternator or by an improperly set voltage regulator. Check both.

BUNK BED.....



By David X. Manners

You can build a better bunk than you can buy. Here's one that has roll-out drawers and a clothes hamper.

WHERE INDEED could you buy a bunk bed that has all four of the following advantages?

(1) A four-inch foam-rubber mattress on a base that offers superior support for healthful sleeping.

(2) Plenty of storage space including two big roll-out drawers, an enclosed headboard compartment and a built-in roll-away clothes hamper.

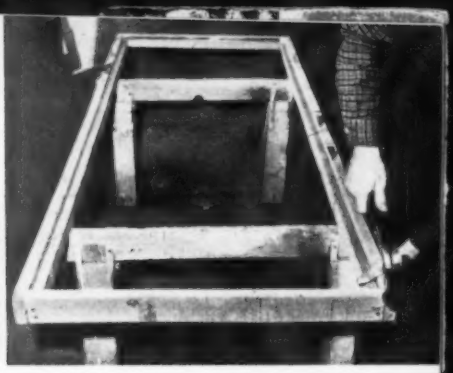
(3) No dust-collecting under-the-bed area to be cleaned.

(4) An attractive design that makes this piece of furniture a decorative asset in any bedroom or playroom.

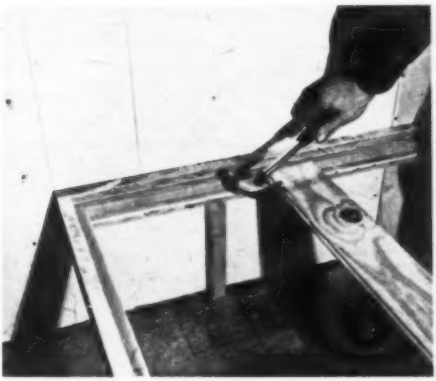
The bunk is designed to take a standard 30x75-inch mattress, although it can also be built to accommodate a 39x75-inch mattress. Both are stock sizes.

The bunk frame is made of 2x3-inch hardwood and is 77 inches long. Cut a ¾x¾-inch strip from one side of this stock and, after the frame is assembled,

ROOMY bunk drawers hold linens and clothing, roll easily on ball-bearing casters.

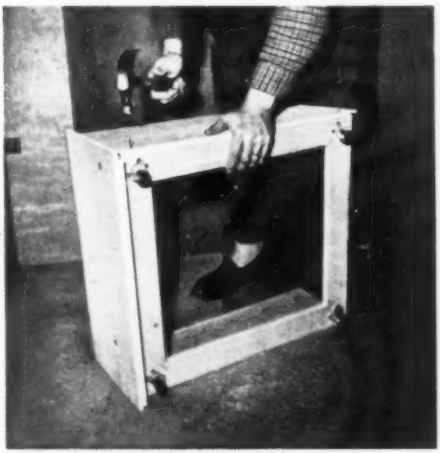


BUNK FRAME is carefully assembled to support pegboard mattress base.



CHECK equal length of frame by sliding a plank from side to side between the ends.

FASTEN FRAME to wall by nailing into studs, then start work on headboard.



CONSTRUCT two identical roll-out drawers having front panels that conceal casters.

MATTRESS BASE is a panel of ¼-inch pegboard which supports the mattress.

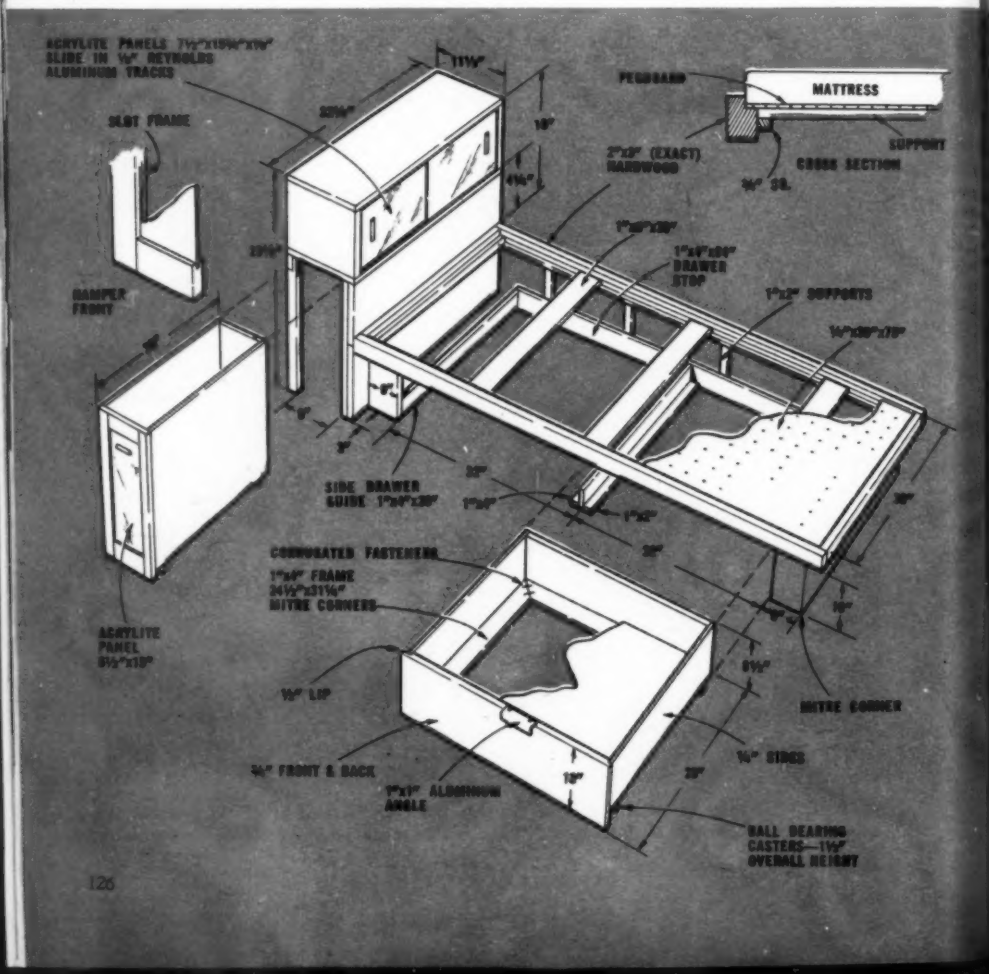
nail this strip ¾ inch below the edge from which it was cut. It serves as a ledge for the ¾-inch transverse boards on which the pegboard mattress base rests. Nail the frame to the wall so its upper edge is 13½ inches from the floor. Then, at 16-inch intervals nail the 1x2-inch supporting verticals in place.

There is a 4½-inch filler board on each side of the under-the-bunk drawers. At the bunk's head two shelving boards are joined at the frame and help support the headboard unit. Butted joints can be used if this unit is to be overlaid with plywood or Formica; otherwise use mitered joints. The headboard's Acrylite plastic panels slide along a ⅛-inch aluminum track.

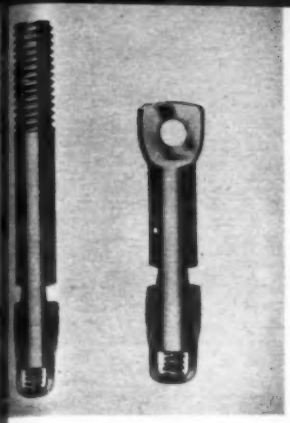
Construct the under-the-bunk drawers next. Miter the corners and join them with corrugated fasteners. Ball-bearing casters, attached to each of the four corners, are concealed by the front drawer panels. The Masonite drawer bottoms are simply dropped into place. Drawer pulls are 1x1-inch aluminum angle screwed to the drawer tops.

Construction of the hamper is the same as that of the drawers except that its front is a panel of Acrylite recessed in a rabbet cut around the front frame. Pulls on the hamper are cut from half-inch stock.

If an attractively grained wood was used for this project, enhance it with a finish of wax or varnish. Otherwise paint it to blend in with the room where the bunk is installed. •

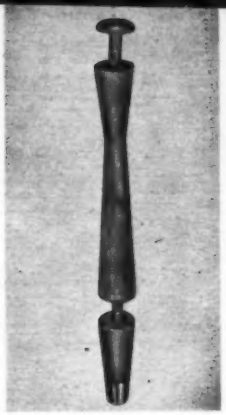


MI's HARDWARE STORE



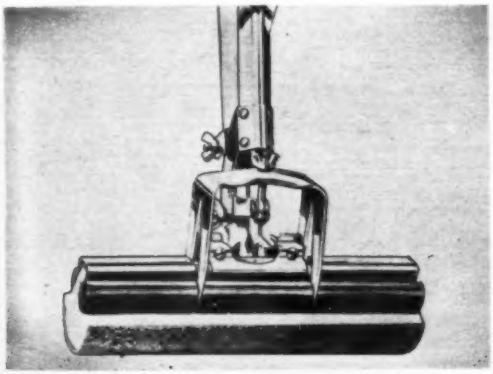
WEJ-IT expansion bolts slip into holes, expand when they're tightened.

Kirel, Inc., Kingston, N. Y.



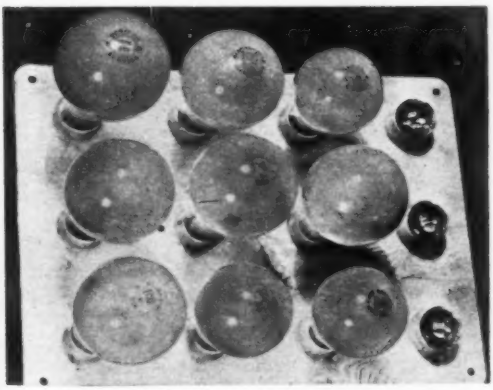
SHELF-MASTER KIT has legs and spacers for tiered furniture.

Stanley, Wallingford, Conn.



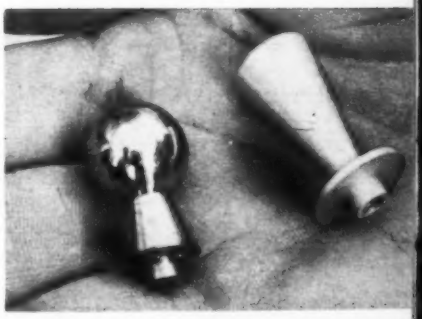
SPONGE MOP scrubs, waxes or dusts and can be squeezed by lever-actuated rollers; costs $5.95.

R. H. Fisher & Co., 112 Atlantic Ave. W., Virginia Beach, Va.



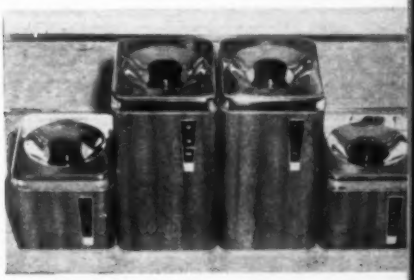
STOR-A-BULB RACK holds spare light bulbs and fuses, comes in red, yellow or gray; $1.00, ppd.

Ridgewood Sales, 64-16 Palmetto St., Ridgewood 27, N. Y.



DRAWER PULLS come in lacquered solid brass or anodized aluminum.

Engineered Prod. Co., Box 118, Flint, Mich.



CANISTER SET of wood-grain vinyl permanently bonded to steel: $9.98.

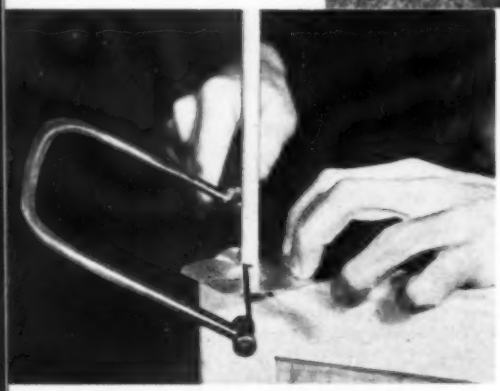
Lincoln Metal Products Corporation, 225 42 St., Brooklyn 32, N. Y.

On request, Douglas Fir Plywood Association, Tacoma 2, Wash., sends a how-to folder covering 12 new fence designs. . . . Aluminum uses are covered in How To Make Your House A Carefree Home, a 32-pager sent free by Aluminum Co. of America, 752 Alcoa Bldg., Pittsburgh 19, Pa. . . . Ten cents brings How To Get More Out Of Life With Light, a booklet on uses of lamp fixtures by Lightolier, Inc., Jersey City 5, N. J. . . . Write Cadillac Plastic & Chemical Co., 15111 2nd Ave., Detroit 3, Mich., for a folder on outstanding properties and applications of 13 major plastics.

TILE-TOPPED LAMP TABLE

Early American design is combined with modern tile for a pleasing and practical piece of furniture.

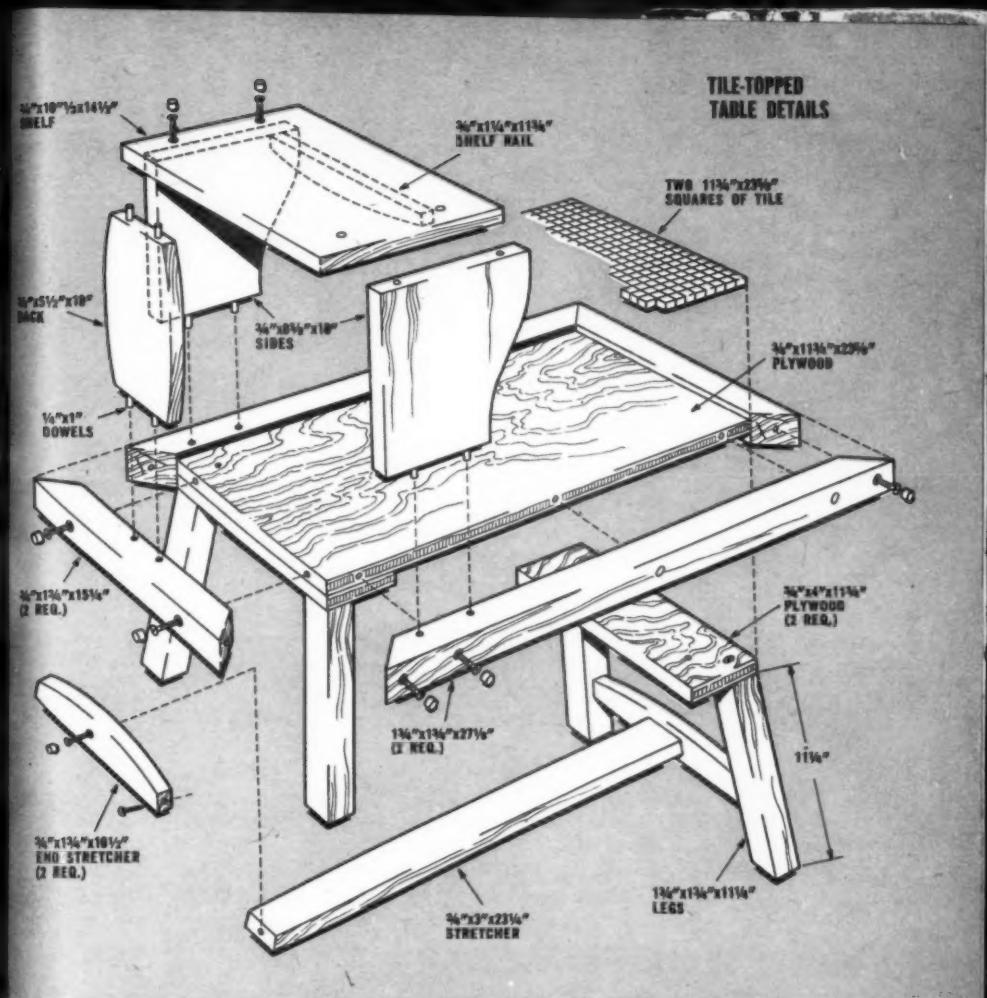
By
Robert Hoppough

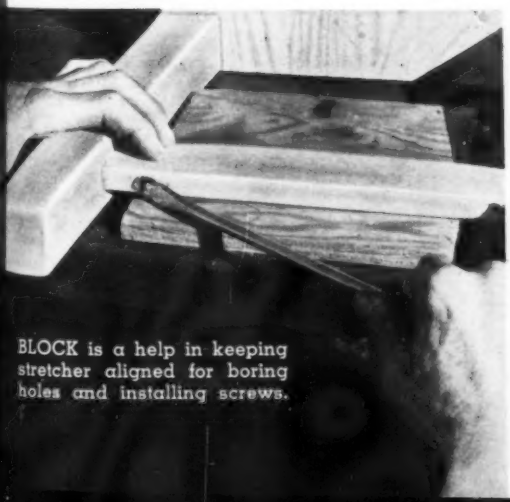


DOWEL PLUGS are cut off close without marring surface by using thin metal mask.

MOTTLED brown tiles blend nicely with the cherry-finished wood in this table, enhancing the appearance and also increasing the practicality of the piece. Construction is simple and the tiles are no problem because they come ready-mounted on a cloth or paper backing which you can glue down in sheets.

Dimensions of the plywood top can vary slightly, depending upon the size of the tiles used. In any case, start with the top and attach the frame with glue and screws. A good tip is to finish-sand all pieces before assembly to eliminate the difficulty of trying to sand into cor-

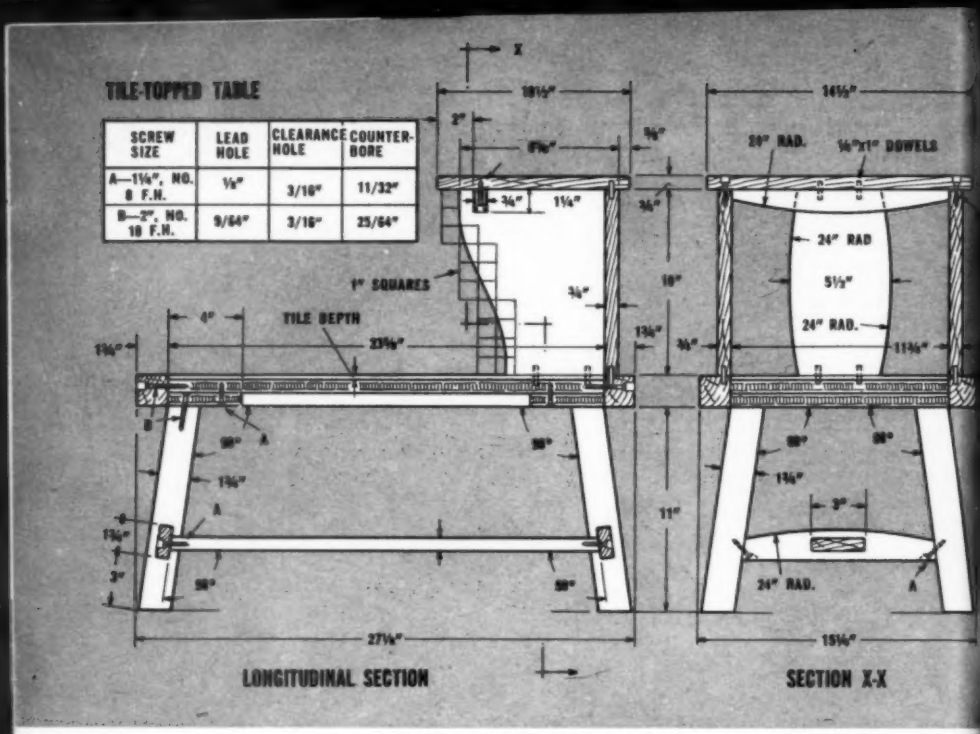




BLOCK is a help in keeping stretcher aligned for boring holes and installing screws.

ners. Use long clamps to hold the pieces until the glue sets and then bore the pilot holes for the screws. The job is speeded up considerably if a combination drill, countersink and counterbore is used. A standard dowel is cut up to plug the screw holes. The contrast in grain between it and the hardwood in the table adds to the decorative quality of the finished piece.

The angle cuts of the legs are easy with a circular saw. Just tilt the blade 8° and adjust the



miter gauge 8° left or right of the 90° mark as required. After rounding the corners of each leg and sanding it smooth, it is attached to the crosspiece with glue and one 2-inch, No. 10 screw. Each pair of legs is then installed as a unit and the stretchers go in as illustrated.

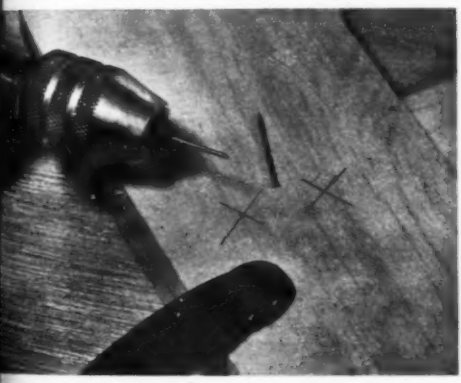
At this point it is wise to completely finish the wood because the joints between the tiles must be filled with a grout which could get into [*Continued on page* 156]

USING ¾-in. plywood crosspieces permits each pair of legs to be installed as a unit.

BELT SANDER cuts in a straight line with wood grain, takes plugs down flush.

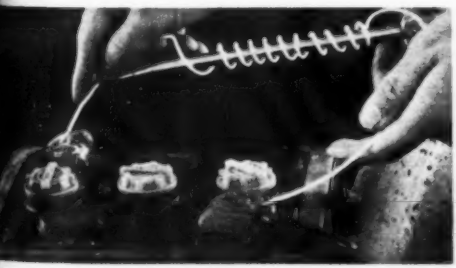
Shop Shorts

TWO saber saw blades soldered together make a good tool for squaring round holes.



NAIL with head cut off can be used as a drill bit for a small or odd-sized hole.

HEAVY WELDER is easily moved on dolly made of plywood and 2-in. plate casters.



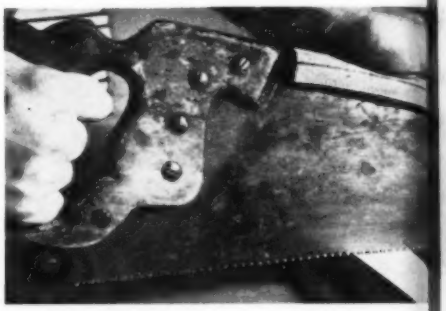
MAGNETIZE a tool as shown: just touch ends of insulated wire to battery posts.

TOOL OILER is tight roll of oil-soaked felt weather stripping in shoe polish can.

COIL SPRING connected to hinge-mounted motor and machinery frame will help to relieve excess tension on the motor's V-belt.

WHEN DOING an assembly job, prevent the loss of tiny parts by laying them out on the sticky surface of tape as shown above.

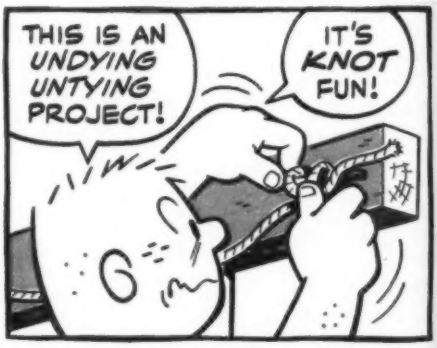
HOME AND SHOP SHORTS

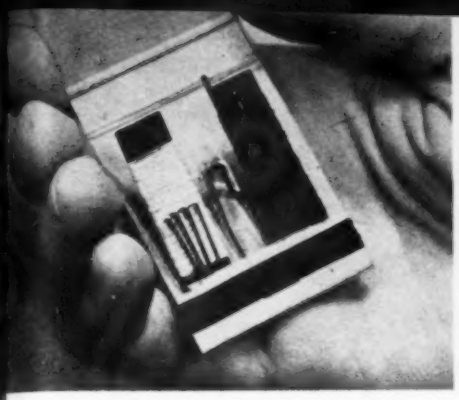


SHORT LENGTH of slit garden hose fitted over back of a handsaw blade permits you to bear down on blade when making a cut.

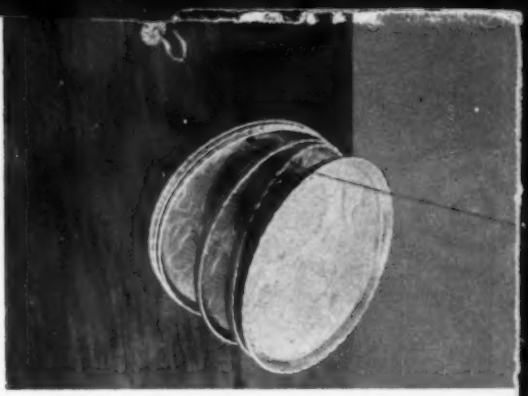
Send Freddie Fumbles your idea of a good short-cut, time-saver or safety device in your work, whether it be in the home, shop, office or farm. Each tip accepted will be paid for at the rate of $10. Naturally we cannot acknowledge or return the ones we cannot use. However all will be carefully read and evaluated. (Those which we can use in other departments of MI will be paid for at our regular rates.) Please send in your ideas on a postcard only. Address to Freddie Fumbles, *Mechanix Illustrated*, 67 W. 44th St., New York 36, N. Y.

FREDDIE FUMBLES





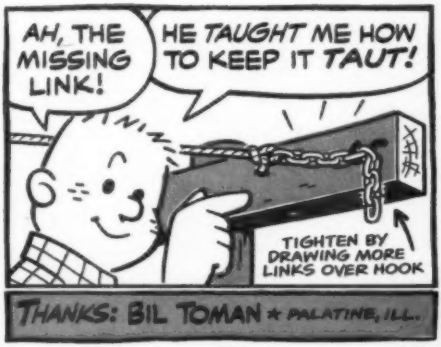
USED MATCH BOOK can hold a handy emergency sewing kit that includes some pins, black and white thread and needles.



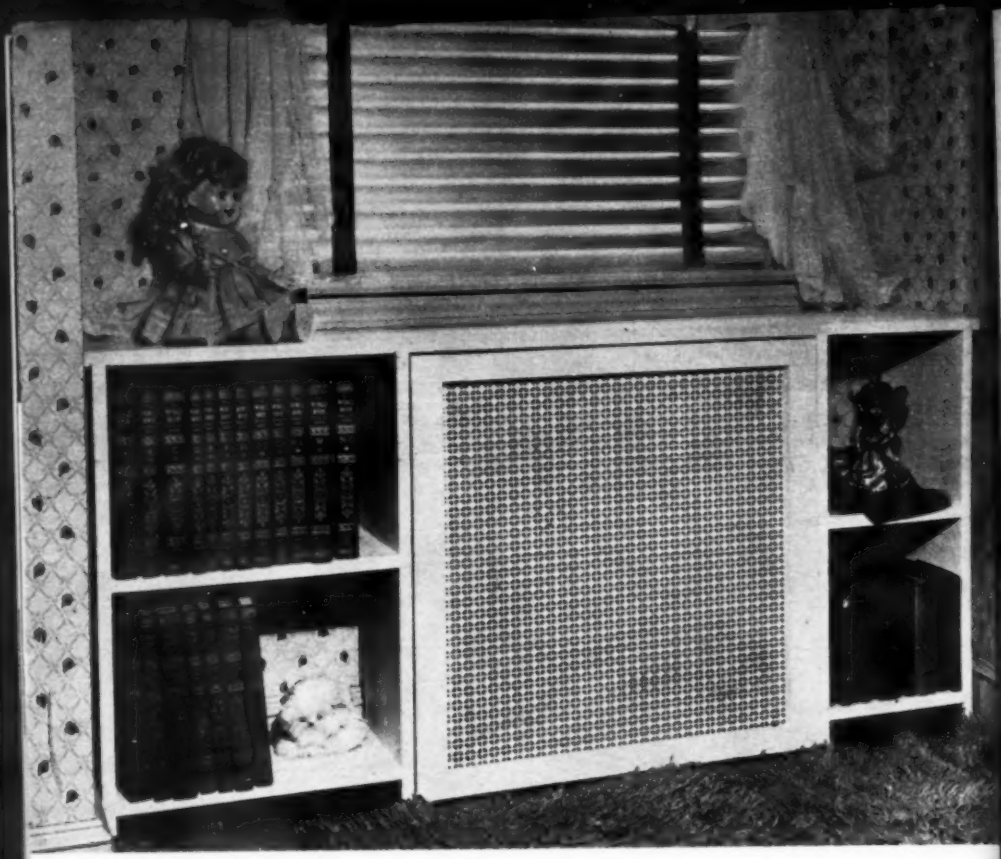
BURGLAR ALARM consists of metal coasters strung on a black thread spanning doorway. Intruder breaks thread—and crash!

TICKING ALARM CLOCK keeping you awake? Both the ticking and the alarm bell will be muffled if the clock is set on a towel.

CLOTHESPIN CONTAINER is made from a tin can and a pair of wire hangers. Cover it with a plastic bowl cover when not in use.



THANKS: BIL TOMAN ★ PALATINE, ILL.



Bookcase Radiator Enclosure

Try this vanishing act on your radiators and see how it enhances the beauty of your rooms.

By Ralph Severt

HERE'S a simple and practical wood project that marries a handsome radiator enclosure to a pair of attractive bookcases. In all fairness it should be pointed out that this bit of bigamy was somewhat atoned for when it was proved that the enclosure could and did support both bookcases in fine style from the moment the union was made.

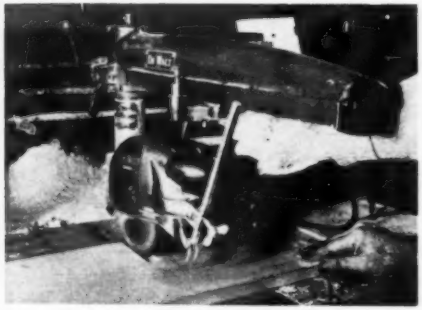
The entire unit—except for the 1x2-inch stock comprising the grille frame—is made of 1x10-inch boards. The perforated metal grille material is available in a variety of designs at all hardware stores. The side sections are planned for two shelves which have a larger-than-usual space between them for a set of encyclopedia and other extra-tall books.

Start by sawing the top board and

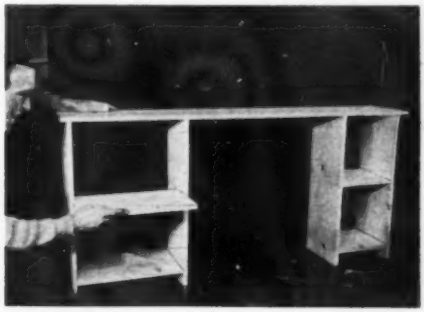
the four uprights to size. Keep in mind that the uprights will fit into quarter-inch-deep rabbets, so allow for that in their length.

Having provided clearance for the radiator valve, locate the inside positions for the two uprights at each side of the radiator, as well as for the two that fit one inch in from each end, then mark the top board for rabbeting. Now put a dado head on your power saw and cut

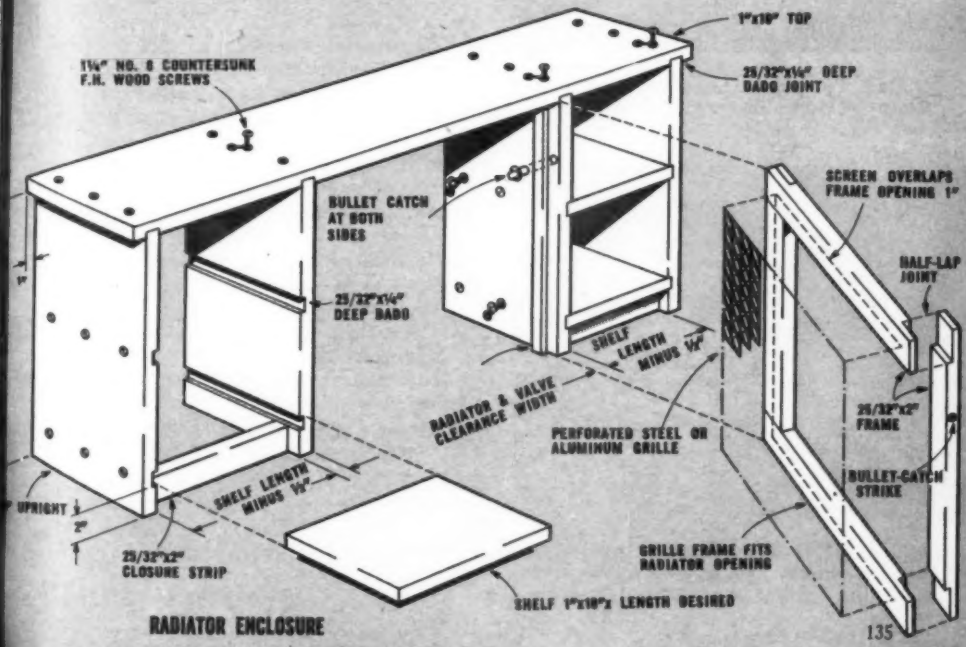
APPLY GLUE along top-board grooves before securing uprights in place with screws.



FOUR RABBETS ¼-inch deep are cut across underside of top board using a dado head.

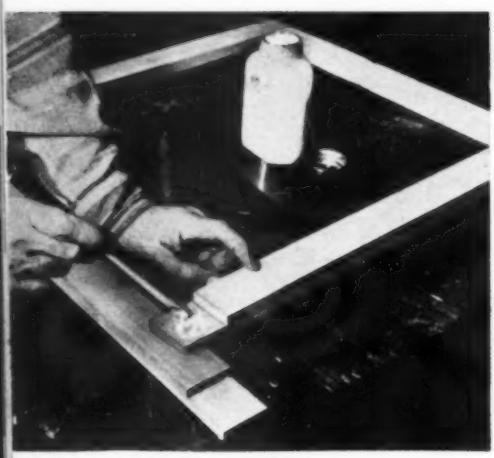


RABBETED UPRIGHTS support the shelves. Now make the frame for the metal grille.



RADIATOR ENCLOSURE

UPRIGHTS of unit are secured with glue and screws in rabbets cut into top board.



GRILLE FRAME is half-lapped at corner joints and assembled with glue and screws.

DECORATIVE metal grille is cut to size with tin shears, then stapled to the frame.

out these four ¼-inch-deep rabbets.

The uprights must also be grooved to receive the shelves. Mark off two inches from the bottom of each, divide the remaining space evenly, then rabbet each according to the diagram.

These pieces are now temporarily assembled and squared so that the shelf positions can be marked and the shelves then sawed to fit.

Before proceeding, check the area where the unit will be installed to see if any interference—such as a baseboard or other projection—will prevent it from standing flush against the wall; if so, trim the back of the shelves or uprights as required. Now permanently assemble the unit with glue and flathead wood screws.

The frame for the radiator grille is made of 1x2-inch stock joined at the corners with half-lap joints. Set the dado head to cut through half the thickness of the corners of this stock. First test the cut on two scrap pieces, raising the blade in gradual steps after each pass until the depth is correct and both pieces fit flush together. When the width of the cut makes a complete half-lap joint, clamp a stop block on the miter gage. All four frame members can now be uniformly notched on each end to form the required joints. Assemble the frame with glue and nails at the corners.

Measure the perforated metal grille material so that it will overlap the frame one inch all around, then cut it to size with tin shears and staple it to the interior surface of the frame. The frame is held in place by two bullet catches installed as indicated in the diagram. This permits its easy removal and allows ready access to the radiator valve and to the interior of the enclosure for cleaning purposes.

The space between the bottom shelf and the floor may be enclosed with a molding strip fitted under each shelf.

The easiest way to paint the metal grille is with a roller which has been squeezed tightly in the paint pan to remove excess paint so that none will drip down between the perforations. The top ledge and shelves of the unit may be covered with plastic sheeting to give a clean, smooth surface. •

"NOW EARN 5½% per annum paid quarterly

on your savings account...by mail! it's safe and more profitable"

SAYS A. G. NEUMEYER,
President,
First Western Savings

First Western Savings, Nevada's largest, and Southern Nevada's oldest savings association, operating under the savings and loan laws of the State of Nevada, is able to offer higher than average interest rates because we are located in the fastest growing area in the nation, where dollars are needed to finance our remarkable growth. We pay more for this money and in turn, because of our dynamic growth economy, earn more money on our lending program than would be possible in a slower growing area, Specifically, on December 6, 1959, the United States Census Bureau revealed that our area is growing at 4.1 times the Los Angeles rate, and 10.6 times the national rate!

The current interest paid to First Western savers is: 5½% per year on accounts of $5,000 or more, and 5¼% per year on all others.

We have paid substantially higher rates year in and year out to our more than 18,000 prudent savers from all fifty states and fifty-one foreign countries. In fact, this new rate follows 18 consecutive interest payments to First Western savers of 5% per year or more!

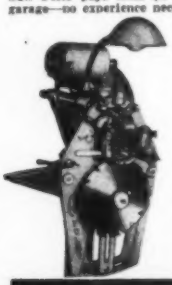
Saving by mail at First Western, is easy, and most profitable. We are no further away than your mail box. To open an account send check or money order. To transfer an account from your present financial institution, just send your passbook or certificate to us. We'll attend to all the details.

Remember: at First Western interest is paid quarterly on all accounts. Withdrawals have always been paid instantly. Airmail postage is prepaid both ways. Funds received by the 15th of any month earn from the 1st. $1.00 opens an account.

Mail funds to:
FIRST WESTERN SAVINGS
AND LOAN ASSOCIATION, DEPT. Y
118 Las Vegas Blvd., South, Las Vegas, Nevada • A. G. Neumeyer, Pres.

Make $20 to $30 a Week EXTRA MONEY!

With the high price of food, clothing and everything else, just think what you could do with extra money every week! Turn your spare time into CASH—sharpening saws with a Foley Automatic Saw Filer pays from $3 to $6 an hour. Start in your basement or garage—no experience necessary. "The first saw I sharpened with my Foley Filer came out 100%"—writes Clarence E. Parsons. No canvassing—"I advertised in our local paper and got in 93 saws"—says M. L. Thompson. With a new model 200 Foley you can file all hand saws, also band and both combination and crosscut circular saws.



FREE BOOK
Shows How to Start

It explains how you can get business from home owners, farmers, carpenters, schools, factories, etc. "I get work from 20 and 30 miles away"—says Charles H. Smith. Free Book, "Money Making Facts," tells how to start. **Time Payment Plan.** Send coupon today—no salesman will call.

Send Coupon for FREE BOOK

FOLEY MFG. CO.
115-I Foley Bldg., Minneapolis 18, Minn.
Send FREE BOOK—"Money Making Facts," and Time Payment Plan.
Name .....
Address .....

SERVICE FOR YOUR B&D TOOLS

Check the Yellow Pages under "Tools-Electric" for the location of the nearest Black & Decker factory service branch or authorized service station.

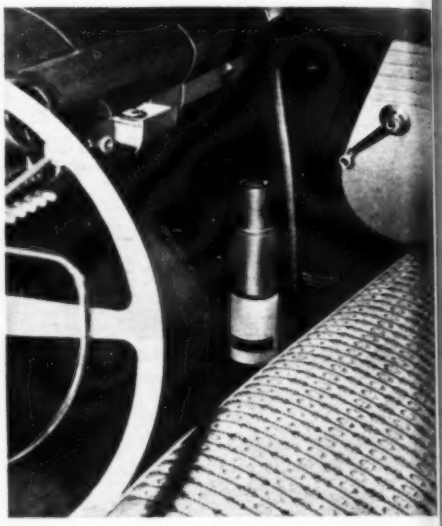
Free tool inspection when requested • Genuine B&D parts used • Factory-trained technicians • Standard B&D Guarantee at completion of recommended repairs • Fast service, reasonable cost, always.

Or write for address of nearest of the more than 50 branches and service stations to: THE BLACK & DECKER MFG. CO., Dept. 8101-S, Towson 4, Md.

50th YEAR Black & Decker

Quality Tool Service

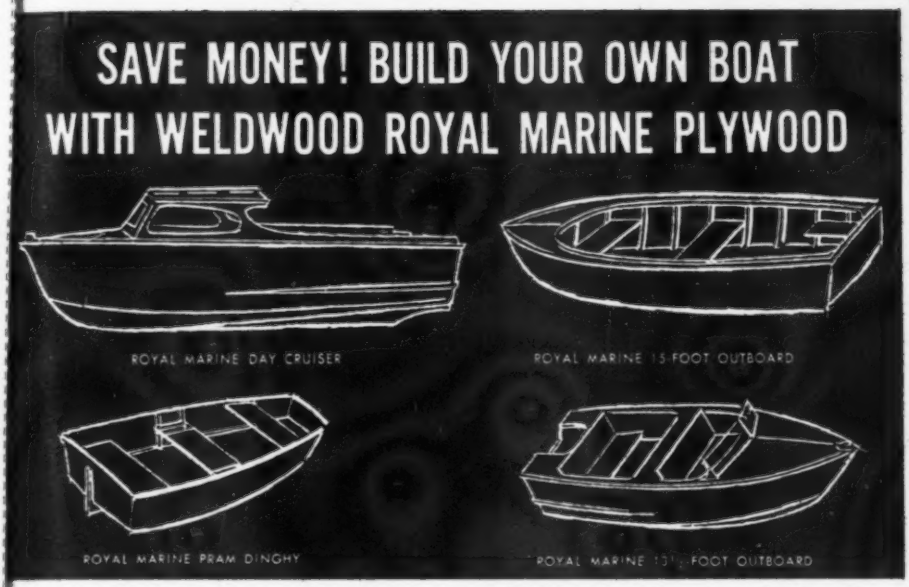
CAR KINKS



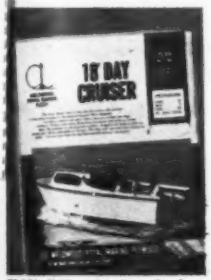
EMPTY one-quart oil can secured to inside of car holds a thermos of hot coffee—welcome refreshment to the road-weary driver.

REFLECTIVE TAPE, applied to the edges of your car doors, warns oncoming drivers that you're either entering or leaving the car.

SAVE MONEY! BUILD YOUR OWN BOAT WITH WELDWOOD ROYAL MARINE PLYWOOD



Free step-by-step plans at your Weldwood lumber dealer's



PLAN #60. A big boat for family comfort and safety, she takes outboards up to 40 hp. Build her to last with big, supple sheets of Royal Marine Plywood.

PLAN #50. This open water boat has storage to keep you comfortable on a two-week cruise. Easy to build with strong, seagoing Royal Marine Plywood.

PLAN #75. This sturdy boat is light enough to haul on your car roof. Plans include instructions on how to convert her into an easy-to-handle sailing dinghy.

PLAN #40. Here's a trim sportster for the amateur boat-builder on a modest budget. She delivers speeds up to 35 mph with power up to 25 hp.

YOU SAVE MONEY—and get satisfaction, too—when you build your own boat. Weldwood's new collection of Royal Marine boat plans gives full details in easy-to-follow diagrams and photos, plus complete materials list. For extra economy, there's Weldwood® Royal Marine Fir Plywood; for extra durability and unusual paint-holding qualities, Weldwood Royal Marine Duraply®; for natural wood beauty, Weldwood Royal Marine Philippine Mahogany. All give you years of low-maintenance boating fun. Pick out your boat plans at your Weldwood Royal Marine lumber dealer's. Or mail the coupon for your plans.

WELDWOOD ROYAL MARINE PLYWOOD

Douglas Fir • Philippine Mahogany • Duraply

Send for illustrated boat plans

United States Plywood (MI 1-61)
55 West 44th Street, New York 36, N. Y.

Please send me plans and/or booklet I have circled below.

Plan #60—Day Cruiser Plan #40—13½-ft. Outboard
Plan #50—15-ft. Outboard Plan #75—Pram Dinghy

I enclose 10¢ for each plan ordered.
"Weldwood Royal Marine's Guide For Pleasure Boatmen," Hank Wieand Bowman's new book on how to select the boat that's right for you. FREE.

Name.....

Address.....

City.....Zone.....State.....

Golden Hammer Award Winners

WIND RIDER, a 28-ft. sloop, was built in two years of part-time work by Kenneth Rider, Long Beach, Calif. It sleeps four and has a galley and head; its apitong frames are planked with cedar; a diesel inboard pushes it along at six knots; building costs ran just under $4,000.

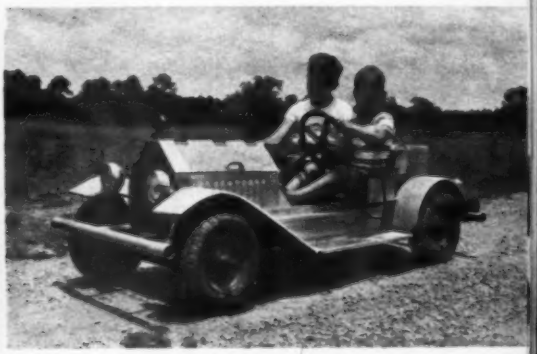
Each craftsman whose project is shown receives a 24-karat gold-plated Hammer and a Workbench Award Certificate. Runners-up will be sent a beautiful gold-plated Golden Hammer Tie Bar or MI's Certificate of Merit. So send us some *black-and-white photos, with negatives,* and a full description of your latest project. Photos of your workshop are also eligible. Send all entries, with return postage, to MECHANIX ILLUSTRATED Golden Hammer Awards, 67 West 44th St., New York 36, N. Y. Entrants are advised that MECHANIX ILLUSTRATED cannot accept responsibility for customs charges, duties, taxes, etc., levied against Golden Hammer and Golden Hammer Tie Bar winners outside the United States.

The following craftsmen have been awarded GOLDEN HAMMER TIE BARS for their projects: Arden R. Kincaid, Richmond, Va. . . . John Kernoski, San Diego, Calif. . . . C. Chelales, Massapequa Park, L. I., N. Y. . . . L. R. Chenoweth, Columbus, Ohio. . . . Leemer Gene Cernohlavk [Continued on page 155]

WEEKEND WORK built this full-time house. William Wedo, Phillipsburg, N. J., did all construction except electrical and plumbing jobs. House took four years to build.

REBUILT from a wrecked boat, this 12-ft. runabout does 30 mph with a 25-hp engine. Re-builder Floyd Rush, Eglin AF Aux. Fld. No. 9, Fla., is shown with his children.

WHEELED BARBECUE STAND was built for $5 by E. C. Johnson, Chatham, N. J. It has a redwood working table, circular grill and storage space for charcoal, gloves, tools.



PINT-SIZE Stutz-Bearcat, assembled from scrap parts for $100, does 10 mph with a 3-hp engine. It was built by Frank Burns, Brookhaven, Miss., for his 5-year-old son.

ENOTTY PINE Colonial dry sink shows the craftsmanship of George Horstmann, Stratford, Conn. It accommodates his hi-fi and TV sets and record collection. Cost: $70.

BEAUTIFULLY FINISHED basement room is the artistry of brothers Phil, Frank and Johnny Cammarata, Brooklyn, N. Y. Furnishings include bar, fountain, hi-fi, murals.

PHOTO KINKS

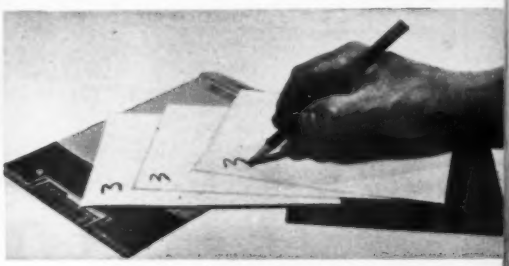
DARK SHADOWS on photographs can be corrected after printing by the use of potassium ferrocyanide solution (half-teaspoon to four ounces of water) applied as shown.

INSUFFICIENT LIGHTING shaded out one side of this girl's face until solution . . .

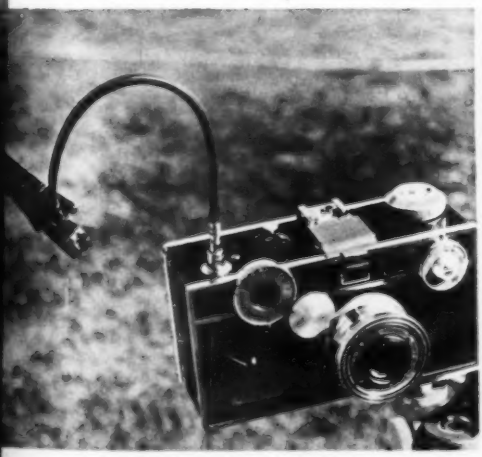
. . . was applied to bring out adequate detail. Action is stopped in the hypo bath.

STAINED developing trays can be cleaned by soaking them with a mixture of water and bleach for 15 minutes, then rinsing.

"DARKROOM" is an overcoat draped over a drawer containing developing tray. While working, slip arms through coat sleeves.

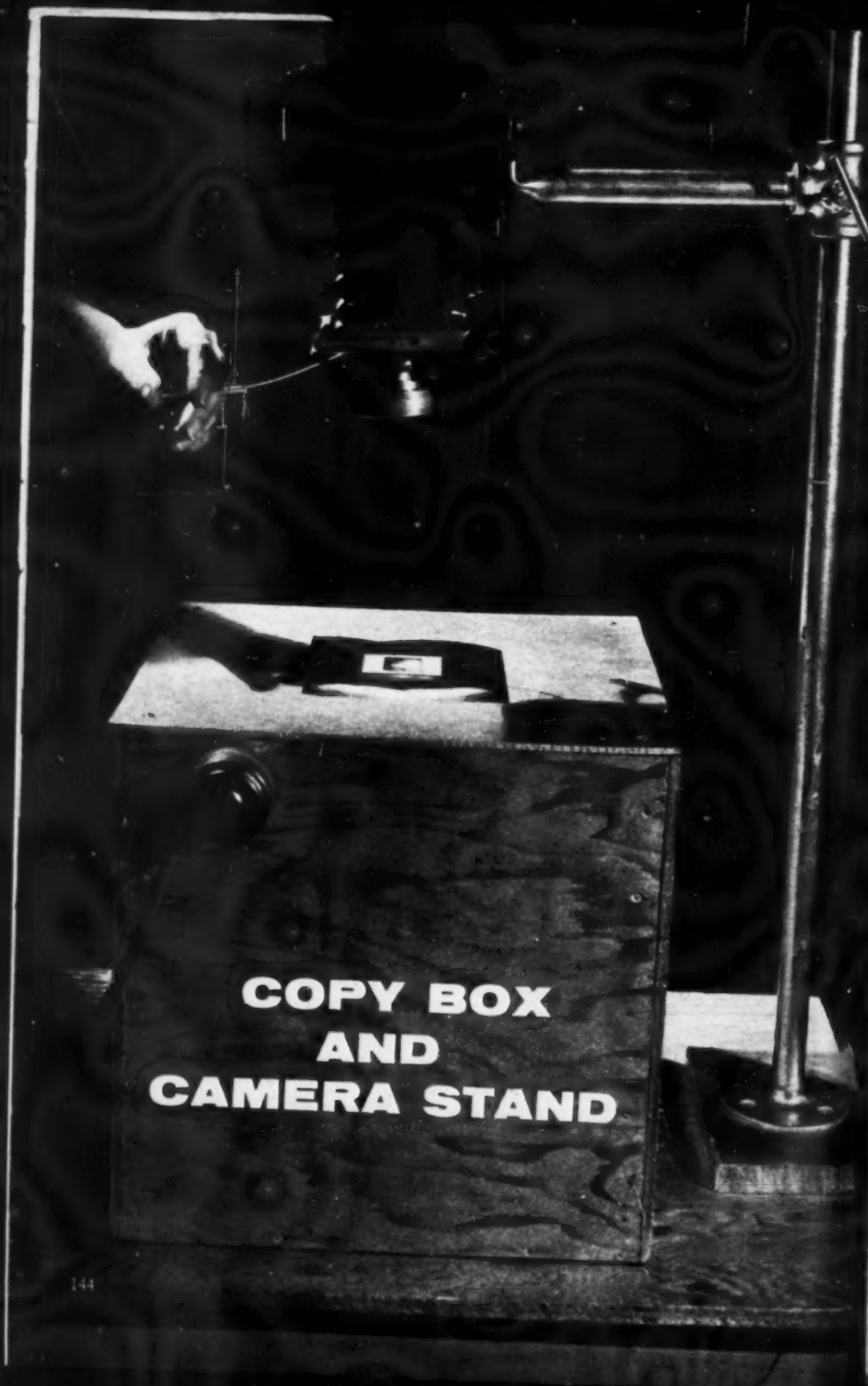


USE negative pencil to mark grade number on back of each sheet of printing paper. Numbers will be visible under a safelight.



IF YOUR CAMERA does not have a "time" position, use a notched spring-type clothespin to hold shutter at the "bulb" opening.

MAKE YOUR OWN borderless enlarging easel from ¾-in. plywood. Tack on masking tape sticky-side-up to hold print to the easel.



By

M

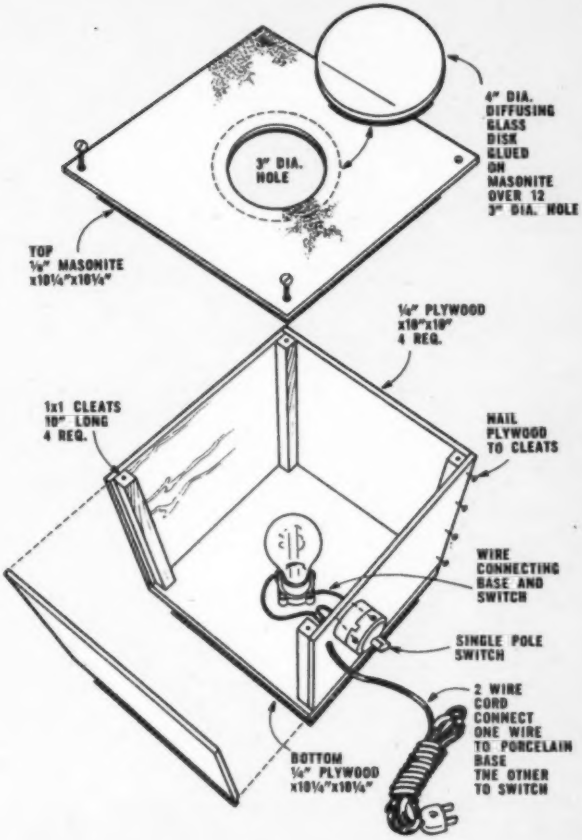
proc
tures
the
from
know
made
able
you
from
quali

Th
plyw
insta
ing
100-v
in th
contr
of the
inch
of th
glued
diffus

Th
made
sectio
base.
on th
are be
tical
for th
tache
of hor
be eas

COPY
light

HOW TO ASSEMBLE THE COPY BOX

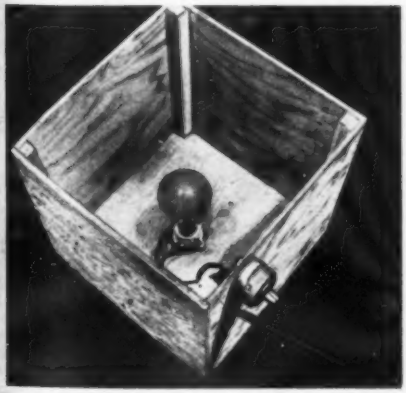


By Wayne Floyd

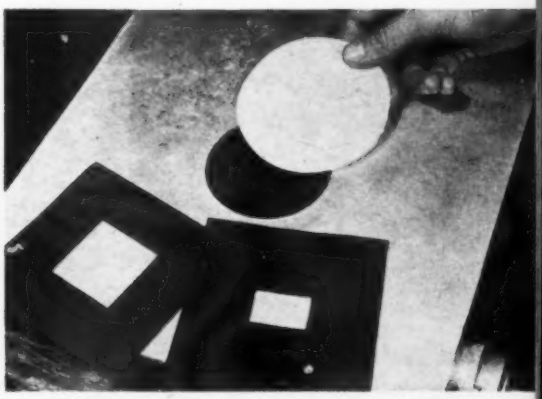
MOST photographers are familiar with the procedure of copying pictures by reflected light but the making of negatives from slides is not so well known. This copy box made from readily available materials will enable you to make negatives from slides professional quality.

The device is simply a plywood box with a light installed behind a diffusing glass in the top. A 100-watt bulb is mounted in the bottom and a light-control switch on the side of the box. Over the three-inch hole cut in the center of the Masonite box is glued a four-inch circle of diffusing glass.

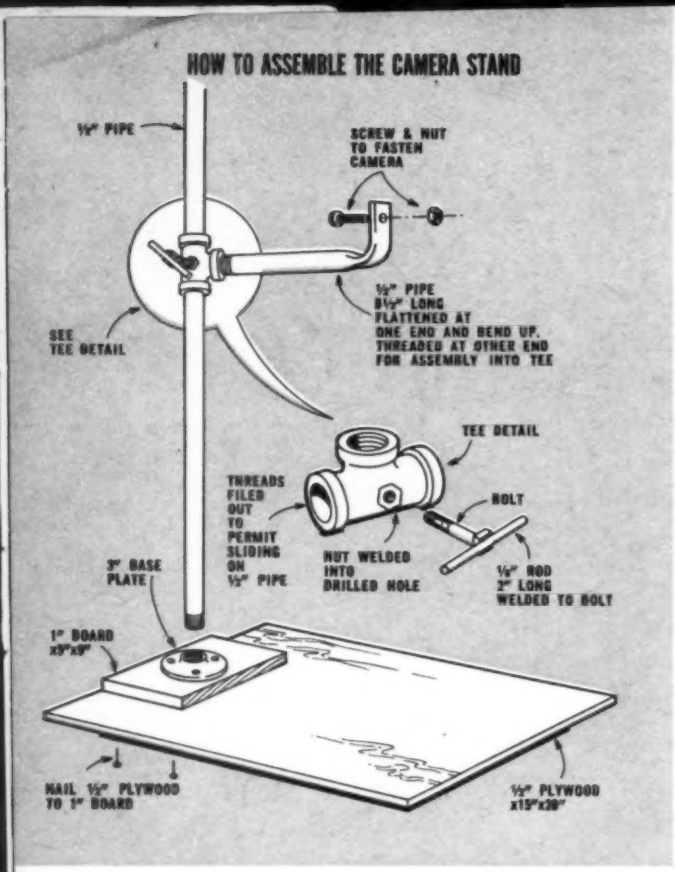
The camera stand is made from half-inch pipe sections fitted to a plywood base. The copy box sets on this base when slides are being copied. The vertical pipe acts as a tripod for the camera which is attached to a shorter section of horizontal pipe that can be easily raised or lowered.



COPY BOX'S simple construction includes light socket with switch on side of box.

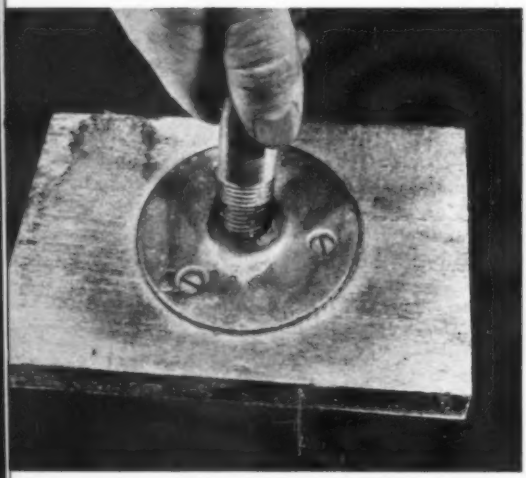


DIFFUSING GLASS is glued over hole in box top. Cut masks to fit around slides.

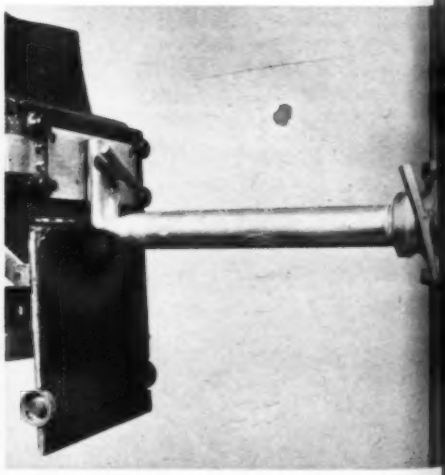


To use the copy box simply place it on the base board of the stand and insert your slide over the glass. Block out excess light around the edge of the slide with a mask cut from black paper. The exposure will vary with the intensity of the light, the density of the negative and the type of film used. If your camera is not the type with extension bellows for making copies and doing close-up work, you'll need an accessory close-up lens. Try a test exposure before making a "run."

The camera stand itself can be used for copying pictures; just place them on the board under the camera. For illumination, regular photoflood bulbs are recommended. You will find that negatives made with the diffused light of this box are superior to those made by projection or other methods. •



PIPE screwed into base plate provides the vertical support at end of the camera stand.

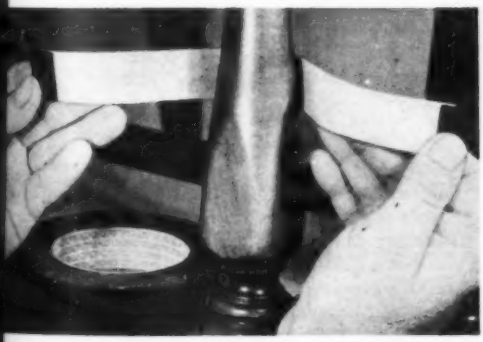


CAMERA attaches to short horizontal pipe which can move up and down vertical pipe.

LID OF CAN bent as shown supports paint brush in turp bath without warping bristles.

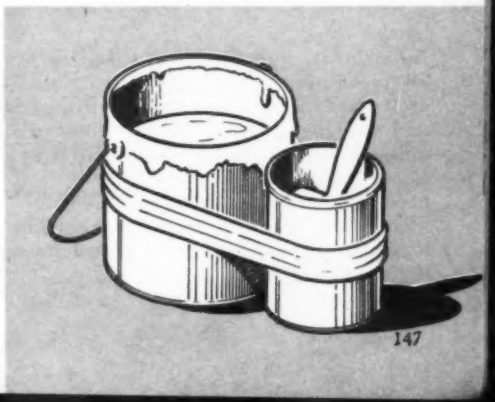
FRESH PAINT TIPS

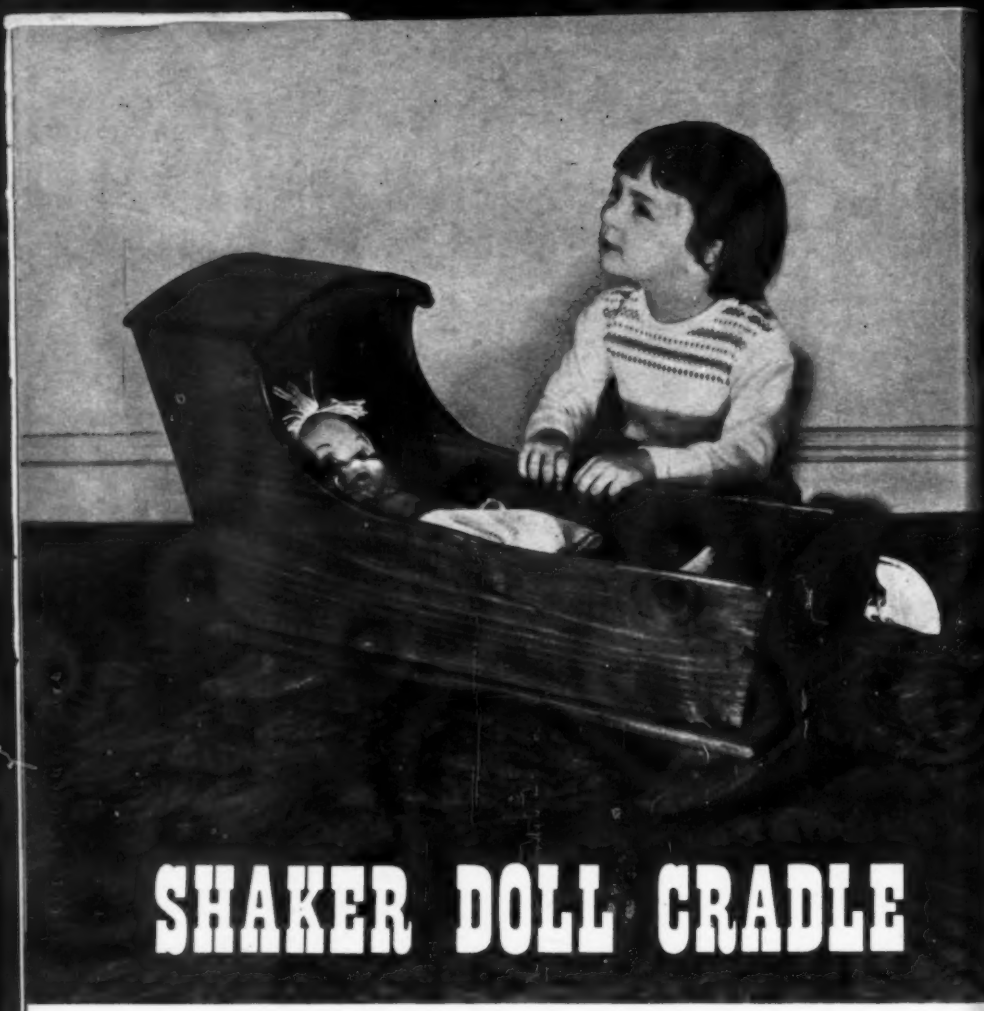
WHEN PAINTING from a tin can, bend lid halfway back so edge serves as brush wiper.



SANDPAPER used on round stock will last longer if it is backed with masking tape.

IF INTERRUPTED at painting, place brush in an empty can taped to the paint bucket.





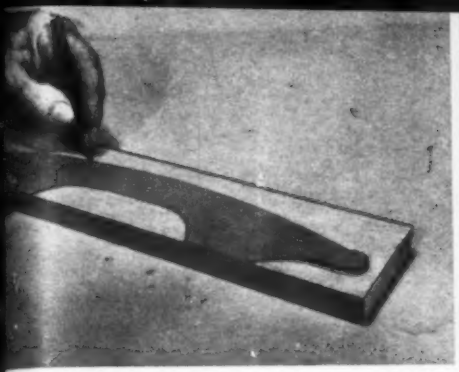
SHAKER DOLL CRADLE

With less than two dollars and an evening's time, you can build this charming doll cradle for a little girl.

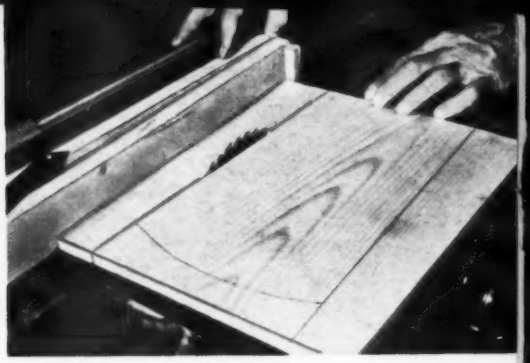
By Ralph Treves

YOU can delight any little girl by presenting her with this colonial doll cradle. It's quite simple to build and the materials cost less than two dollars—if you don't already have them lying around. In knotty pine, all you need is an eight-foot length of ½x12-inch stock and a one-and-a-half-foot length of ¾x6-inch stock. An oil stain is the only finish required.

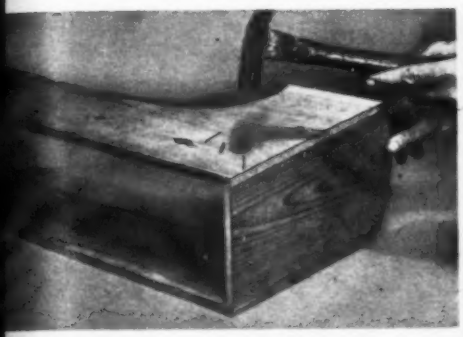
To make the cradle, just lay out a grid of one-inch squares on kraft paper and trace the outlines of the sides, for which you have a full pattern, and the runners and the canopy brace, for which you have half patterns. Then cut them out and trace them on the pine; the other parts can be drawn directly on the wood for cutting. Assembly is completed by using nails and screws as indicated in the photo captions and a cornering tool gives the antique effect which is heightened by the stain. •



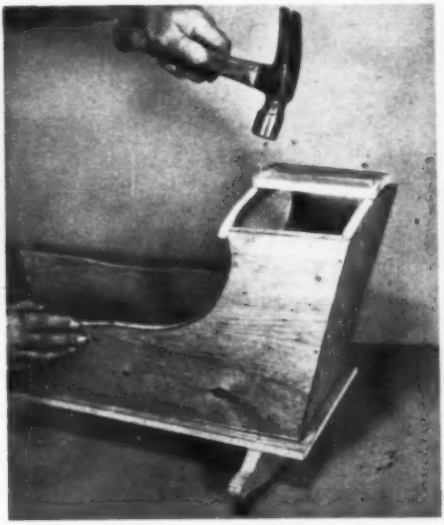
PATTERNS are cut from heavy kraft paper and their outlines are traced on the wood.



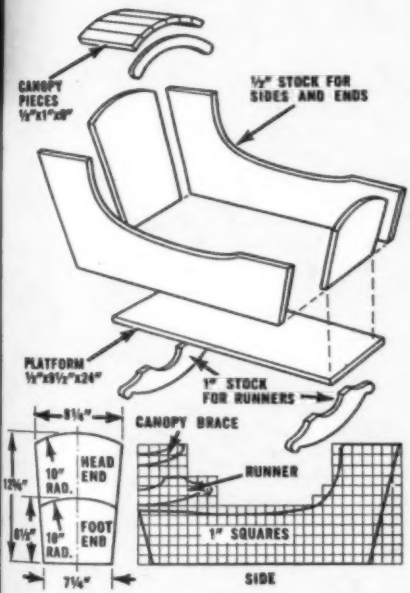
TAPERED SIDES of head and foot panels can be cut with circular saw or by hand.

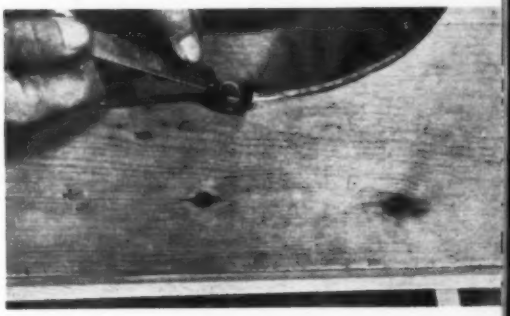


NAILS are used for most of the assembly but the runners are fastened with screws.

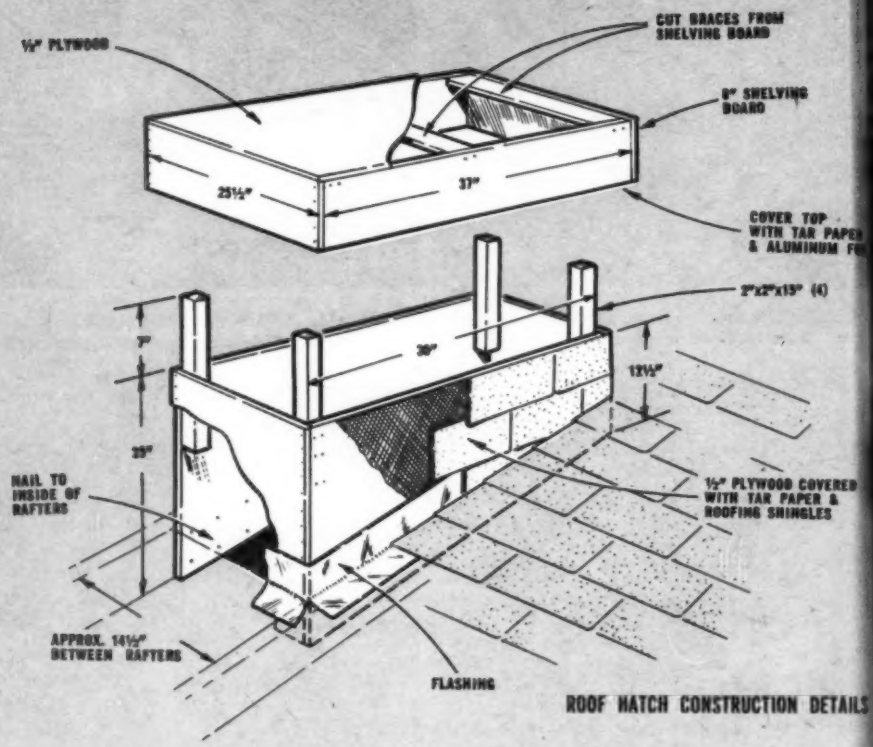


STRIPS of wood are nailed in place to form canopy. Screws secure canopy braces.





EDGES are "antiqued" with a cornering tool which removes thin slivers of wood.



ROOF HATCH CONSTRUCTION DETAILS

ROOF HATCH

This installation gives you easy access to the roof and also helps ventilate the attic.

By Paul Hertzberg

THIS HATCH will give you ready access to your roof and also provide an escape for that hot air that builds up in most attics during the summer. Start the job early in the morning and you'll probably be done by evening. First select the roof area where the hatch will be located and mark it off between two rafters. Drill a hole through the roof at the midpoint of each of the four sides, then saw out the section and remove it. Now cut the plywood sides to size and nail them in place against the rafters, butt-jointing the end pieces. Cut, then nail the four 2x2 lid-supporting corner posts in place so they extend seven inches higher than the sides. Staple tar paper to the exterior of the sides, smearing the ends with roofing cement and tucking them beneath the existing paper under the roof shingles. Nail and cement the aluminum flashing in place at base of the hatch so that it fits under the shingles and against the hatch sides. Finish up by shingling the hatch all around. Construct the lid, covering it first with tar paper, then with aluminum foil to reflect the sun's heat. •

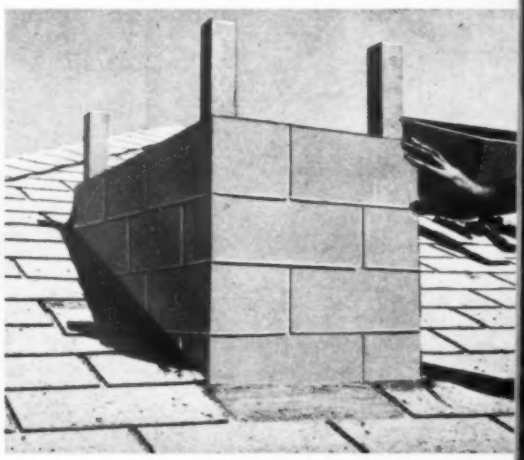
WITH LID OF THE HATCH REMOVED, light and air are admitted to the attic below.

USE keyhole and crosscut saws to cut out hatch opening between two attic rafters.

HERE'S HOW completed hatch opening will look before plywood sides are installed.

INSTALL hatch sides by nailing them to the rafters and butt jointing their ends.

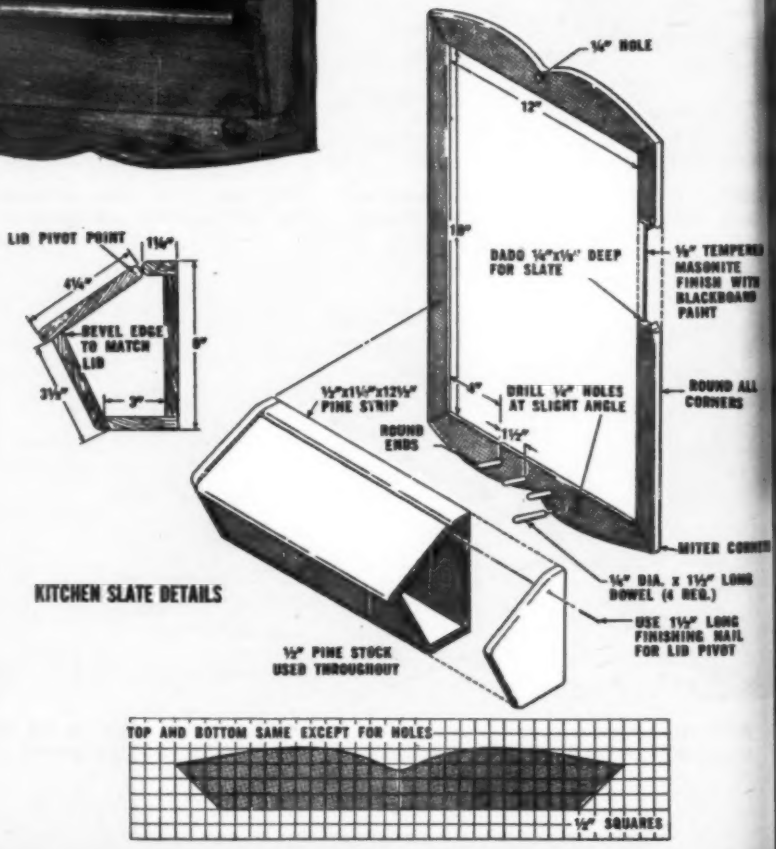
NAIL corner posts in place, apply the tar paper and cement flashing around the base.



SHINGLE the sides of the hatch, top it with the lid and the project is completed.

EVENING PROJECT

KNOTTY PINE and a piece of Masonite make up this Early American kitchen slate with storage bin and peg rack. Make the frame by tracing a template for the top and bottom pieces on half-inch graph paper. Drill the peg holes at a slight angle so the pegs will tilt up. Cut the frame, then dado along the back edge of each section to provide a recess for the slate. Make the storage bin and attach it as shown. Apply two coats of blackboard paint to the Masonite slate, sand and varnish frame and bin, then secure the slate with brads. •



KITCHEN SLATE DETAILS

Glue it right the first time with the right Weldwood Adhesive

Quick, clean Presto-Set® Glue, the all-purpose glue, bonds paper, wood, cloth, china. Dries fast, won't stain. Handy new bellows-action squeeze bottles with spreader tops. From 39¢.

Bonds instantly on contact. Weldwood Contact Cement permanently bonds plastic, leather, and wood. Needs no clamping, and is water-resistant. Stays flexible. From 29¢.

Strongest of them all is Weldwood Plastic Resin Glue. For heavy-duty jobs. Makes joints even stronger than the wood itself. Mixes instantly, is water-resistant. From 40¢.

Waterproof and best for lawn furniture, boats, Weldwood Waterproof Resorcinol Glue makes a powerful bond on most porous materials. Resists rot, fungus, heat, cold. From $1.15.

Put it together *permanently* with the Weldwood® Adhesive made for the job. Better still, keep all 4 Weldwood Adhesives handy—then you're always ready for almost any gluing job. Your hardware, lumber, and paint dealers stock them all—pick up a supply soon.

WELDWOOD
ADHESIVES

Products of United States Plywood

Winter Starting

[*Continued from page* 123]

with a carbon tetrachloride fire extinguisher.

If the engine cranks fast enough but won't go into action, the first step is to make sure there's spark. Take off a plug wire and hold the tip within a fraction of an inch from the engine head while someone turns the starter key. If spark jumps the gap, ignition to the plugs is good enough. However, the plug electrodes may be fouled with carbon and oil and a hint that this has occurred is steadily increased difficulty in starting each morning. Burned breaker points will also bring on progressively delayed starting. A leading cause of burned points is excessively high primary current.

Hard starting may also be caused by ice in the fuel filter bowl. Hot water poured on the carburetor bowl, fuel line and fuel pump will help get the fuel flowing again. Ice in the water pump, however, isn't so easy to overcome. Here the engine won't crank and the car has to be towed to a warm place for thawing out.

An owner who must leave his car out in the cold continuously should try to park on a grade at night, blocking the wheels for protection. This offers the prospect of getting the engine started by coasting. With a stick shift, switch on the ignition, move the lever to High and coast with the clutch pedal down. When the car is moving at 15 mph, allow the clutch pedal to come up. There are various ways to coast-start cars with different types of automatic drives, but in general the trick is to turn the ignition on, depress the Low button and step on the gas. The car will start at about 25 mph. However, it is not possible to coast-start cars with the newer Hydramatics.

Many drivers foul up starting by flooding the engine. Flooding can be detected by the odor of raw gasoline. At this point, wait a few minutes and don't crank again until you have pressed all the way down on the accelerator pedal without pumping it. Cranking at wide open throttle will allow the pistons to suck in more air, clearing the cylinders for normal firing. Continued difficulty may mean that the automatic choke needs adjusting toward a richer mixture, but don't move the setting of the choke coil more than one degree before testing out results.

Starting trouble is often due to the choke lever being cramped by the air cleaner. This big unit on top of the motor is likely to be jarred into an abnormal position and adjustment will correct the fault. While the manifold heat control valve doesn't affect starting directly, it may contribute to trouble because of failure to close when cold. The engine is then slower to warm up and may stall more, thus fouling the plugs.

The starting motor itself is often overlooked. The commutator may be dirty or its brushes badly worn. Be sure to check the battery cable if the car has been in use for some years. Another source of trouble is the neutral starting switch on cars with automatic drive. Sometimes the switch will fail the first time the driver moves the lever to Neutral or Park but will function if he repeats the process. This is a hint that the switch should be replaced. Modern combination ignition and starting switches also can be troublesome. Here again it pays to repeat the switching on process. Any smoke at the key is a plain sign of trouble.

If your car has a stick shift, you can help cold starting by holding the clutch pedal down. This relieves the battery and the starting motor of the extra effort needed to turn over a lot of gears in the cold, congealed transmission lube. In most cases, one press of the accelerator pedal is enough to set the fast idle control and choke, but in many cases a couple of jabs on the pedal will be needed. To avoid flooding, always try a single slow press on the pedal first.

If the car is within reach of an electric outlet, the hard starting problem may be solved with a headbolt heater. You can vary this with a heater to keep the oil warm. Even an electric light bulb under the hood will help if allowed to burn all night. The particular value of a headbolt heater is that the entire engine is ready for action in the morning and is not likely to be damaged by going into action before its oiling system is ready.

Few drivers give it a thought, but starting trouble is often due to a slipping generator belt or a poorly grounded generator regulator. Weak fuel pumps are also a source of trouble. Occasionally, ignition timing is found to be too far advanced. Then too, breaker points are often burned because of oil vapor working past a worn distributor shaft, especially where there is excessive crankcase pressure through clogged vents.

In your final warm-up on this cold subject, don't forget that a set of hotter spark plugs will help by overcoming the tendency of a worn motor to foul its plugs. The simplest trick of all is to give the car the benefit of more daylight travel. It helps keep plugs clean, charges the battery, eases valve stickage and burns diluents from the oil. After all, the way a car runs has everything to do with the way it starts. •

Golden Hammer Awards

[*Continued from page* 140]

Washington, D. C. . . Emery T. Renshaw, Bangor, Me. . . B. D. Margerison, Richmond, Va. . . Thomas Z. Hamilton, Culver City, Calif. . . E. J. Ogann, Brookston, Minn. . . Ben B. Caldwell, Lockport, N. Y. . . Irv Meyer, Export, Pa. . . Greg Kennelly, Indianapolis, Ind. . . Mr. and Mrs. J. T. Grueninger, Columbia, Ill. . . Karl J. Ertler, Portland, Ore. . . Clyde Miller, Sr., Costa Mesa, Calif. . . Stanley Hoffman, Vandergrift, Pa. . . Bennie Ficarrotta, Tampa, Fla. . . George Sipkoski, Dayton, Ohio. . . Thomas H. Pratt, Jr., Jamaica, W. I. . . E. E. Miller, Champaign, Ill. . . J. M. Hennington, Buena Park, Calif. . . . Raymond Laffee, Chicago, Ill. . . Pvt. William P. Gray, Fort Bragg, N. C. . . J. C. Black, Mobile, Ala. . . G. C. Lockridge, Balboa, C. Z. . . E. Zelenak, Uniontown, Pa. . . Frank J. Convertine, Nassau Shores, L. I., N. Y. . . William Clendinnen, Jr., Coram, N. Y. . . James Kirsh, Beaver Dam, Wisc. . . Fred R. Taylor, Roseville, Ill. . . Douglas Mattix, Dallas, Tex. . . Raymond Kriley, Stockton, Kan. . . R. E. Williamson, Jr., Atlanta, Ga.

The following craftsmen have been awarded CERTIFICATES OF MERIT for their projects:

The Frank Wesley's, Roosevelt, Wash. . . Stephen H. E. Herring, New Westminster, B. C., Can. . . Alfred F. Fleury, Franklin Park, N. J. . . S. J. Marais, Melville, Johannesburg, S. A. . . Harvey Harris, Boothwyn, Pa. . . Fred S. Norcross, Jr., Roswell, N. M. . . Charles Remesa, Yarrabumba, Canberra, Australia. . . Homer T. Cato, Thomasville, Ga. . . J. C. Black, Mobile, Ala. . . Joseph DePaulos, Oakland, Calif. . . Alvin Press, Spring Valley, N. Y. . . Larry Pyke, San Diego, Calif. . . Werner N. Jochum, Denver, Colo. . . Harry H. Guthrie, Shiloh, Ohio.

Look for names of more winners next month.

You can do more with

DELTA'S 'LONG BED' LATHE

Now you can get a big 36" working capacity between centers with this new 10" Metal Lathe. It's a big value in its class because in addition to more capacity, it offers this exclusive combination of features:

- **Variable Speed Drive—choice of speeds from 50 to 1500 rpm.**
- **Quick Change Gear Box—gives you 54 feed rates or thread pitches.**
- **¾" Collet Capacity—largest available in any comparable lathe.**

You can own this precision lathe for a dollar figure you'll find surprisingly low. It's easy to learn how you can do more with the extra performance features this lathe offers—simply visit or call your Delta Industrial Distributor (listed under "TOOLS" or "MACHINERY" in the Yellow Pages).

Send for Free Catalog!

Pictures and describes the complete line of Delta Metal Lathes and accessories. Write: Rockwell Manufacturing Company, Delta Power Tool Division, 556A N. Lexington Ave., Pittsburgh 8, Pa.

DELTA INDUSTRIAL TOOLS

another fine product by

ROCKWELL

Components Cabinets

[*Continued from page* 116]

center section in place. The center is held with bridges which were purposely left in the jigsawing operation. This is done to provide support while clamping, thus preventing damage when pressure is applied. After clamps are removed, the center is dropped out by cutting through the gaps with a keyhole saw.

Edge and front trim is now attached to conceal raw edges. Solid stock was used. However, you may like to try the tape-type veneer. If you do, be sure to allow for the difference in thickness.

Doors are next. Trim to size on the circular saw then plane and sand all edges smooth. Now prepare the molding by cutting the solid stock on the shaper using the same cutter that was used on the speaker cabinets. Cut and miter slightly oversize then bring to size by careful sanding. To prevent shifting of the molding when glueing, use headless brads to serve as blind line-up pins. Clamp as shown with scraps of inverted molding to obtain a parallel surface for the clamps.

Position the knife hinges and make the necessary mortises. Use a small chisel and remove enough wood so the hinges will lay flat and flush. Bullet catches are also attached at this time.

Because of the heat generated by the TV set, tuner and amplifier, the backs of the cabinets are left open. The rear of the record and turntable compartments are backed with quarter-inch Masonite.

Sand cabinets smooth, stain and finish to match the speakers. Now you can settle back and take in some real enjoyment. Strike up the band! •

LIST OF COMPONENTS

Speakers	Jensen Stereo Director, kit KT-244, with 15-in. Flexair woofers
Tuner	Knight Stereophonic, KN-125, for AM-FM and stereo reception
Amplifier	Knight, 34-watt stereophonic, KN-734, 17 watts per channel.
Turntable	Rek-O-Kut, Rondine, N-33H
Tone Arm	Rek-O-Kut, Model S-120
Cartridge	General Electric, Golden Classic
TV Set	RCA, 17-in. table model.

Party Tray

[*Continued from page* 106]

once again put the assembly aside to dry.

Set one leg of your compass in the center of this block, mark off the assembly to its widest diameter, then round it by cutting along this circumference line with a band saw. Now mount the stock on a small face plate and turn it to shape on your lathe.

Next, mount a two-inch-square block of maple (or whichever light colored wood you've used) on a screw center of the lathe and turn the server-holder knob. When finished, glue it in the hole in the center of the tray.

Remount the tray in the lathe to do the finishing. A good natural finish is achieved by fine-sanding between applications of sealer, allowing adequate drying time between each coat. After smoothing with steel wool, bring the tray to a high gloss by rubbing on four or five coats of paste wax.

The servers are ¾-inch maple dowels tapered and finished on the lathe, then mounted on pointed lengths of ⅛-inch drill rod forced into a center hole drilled in each server. With the drilling of the small, angled holes for the toothpicks, the project is completed. ●

Tile-Topped Lamp Table

[*Continued from page* 130]

the wood grain and spoil the possibility of an unblemished finish. On open-grained woods, it is best to apply a natural paste filler first and follow it with a cherry stain. The filler can be omitted on a dense wood with close grain. Follow the stain with three coats of varnish.

The tile comes next. A large assortment is available from local dealers but the easiest ones to apply are those which come pre-laid on a cloth or paper backing. Use waterproof glue to secure the sheets. Then you mix the grout, adding casein color if desired, and work it in between the tiles. Excess grout is wiped from the surface with a damp cloth.

After the tiles are in, the shelf and its supports are installed. The procedure is obvious from the drawings but care should be taken in aligning the dowel holes. •

Tom Tests '61 Pontiac

[*Continued from page 92*]

one of these crews made the following statement (which I have on tape): "Carrying 30 pounds pressure when 24 is recommended can almost double tire life, and when 36 pounds are used, the tire life is almost tripled."

This bears out my findings of years of testing tires professionally. Most manufacturers recommend low tire pressures for two reasons: first, to achieve a soft ride; second, to cover up engineering and assembly blunders on their product. They figure at these low pressures door handles will stay on a little longer before falling off and rattles will be deadened a bit longer. Factory-recommended pressures can be actually dangerous and definitely lessen the safe handling of any car. Personally, I carry 32 pounds all around in my cars, to answer once again an often-repeated question in my mail.

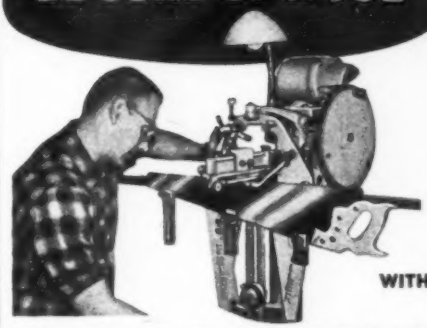
Back to the '61 Pontiac! This is the on-the-ball car of the General Motors camp, and its prexy, being a good quarterback, has no intention of relinquishing his lead, even though he is two touchdowns ahead. In these days of equations and formulas, every manufacturer of medium-priced automobiles is painfully aware that Semon E. Knudsen has solved the problem of how to sell automobiles.

Knudsen is a realist and in this he differs from some company presidents who are still wearing their Alice In Wonderland suits. The basic reason for Pontiac's success, which started shortly after Knudsen took over, was in giving the medium-priced buying public what they wanted, no matter what it was. Pontiac has a goody for nearly everyone but so do a number of other cars. Pontiac, however, stands out from the others through a more realistic and perhaps more honest approach. If you're the kind of guy who wants a few for-instances, here they are: If you want polka-dot fenders, Knudsen won't say you're nuts (as some other prexies would), he'll just find out if there are enough guys who want polka-dot fenders. If there are, he'll build them.

Now let's go to a more important plane. When the Automobile Manufacturers As-

[*Continued on next page*]

you can always
BE SURE OF A JOB



WITH A

FOLEY SAW FILER

Have you been laid off—or afraid you may be? If you want security, plus a bigger income too—don't look for a job—start your own spare time business. In his first 2 months J. F. Robitaille earned $300 with his Foley Saw Filer. From his starting day H. T. Hart made $600 in 4 months. Frank P. Layne wrote—"In our town of 2,800 instead of 200 to 300 saws I did over 1,500 the first year, averaging about $1.50 each."

FREE booklet "MONEY MAKING FACTS" shows you how to get business. The new Model 200 sharpens hand, band and both "combination" and crosscut circular saws. Use our Time Payment Plan—pay for the machine out of your CASH profits. Send coupon today—no obligation, and no salesman will call.

FOLEY MFG. CO., 145-1 Foley Bldg., Minneapolis 18, Minn.
Send Free Booklet and Time Payment Plan on Foley Saw Filer.
Name _____
Address _____
City _____ State _____

NEW MARLITE RANDOM PLANK

beautiful wood-grain paneling you can install yourself!

Add extra luxury to any room with new Marlite Random Plank. The 16"-wide planks are ¼" thick, tongued and grooved for easy installation. Six exclusive new Trendwood finishes capture the beauty of fine woods in a random-width paneling effect. And Marlite's baked plastic finish resists stains and mars, requires no painting or further protection. See your building materials dealer or write for free decorating book. Marlite Division of Masonite Corp., Dept. 130, Dover, O.

Marlite plastic-finished paneling

ANOTHER QUALITY PRODUCT OF MASONITE® RESEARCH

sociation banished all race competition by the factories and performance emphasis in advertising, the other members of the A.M.A. overlooked one important point: The guys who were buying the cars didn't give a damn what the A.M.A. thought or what the manufacturers thought, either. If they wanted high performance with its definite pride-of-possession appeal to many male buyers, then they were going to buy the car that gave it to them. Ed Cole, head man at Chevrolet and king of the low-priced field, never lost sight of this fact, either. It took Chevy many years to catch up to Ford as a performance symbol and Cole knows this sells a lot of automobiles.

After Pontiac's first year as Champ of the medium-price field in 1959, I personally asked Knudsen what he thought was primarily responsible, the good looks of the '59 or the car's performance successes that had made it tops at Daytona Beach that year. Without batting an eye, Knudsen answered, "The top performance of our cars can take at least half the credit."

Pontiac offers looks without giving up any of its athletic prowess over the road. A man can buy a Pontiac with very little fear of being embarrassed in a drag race with a traffic light or in a short tilt down the turnpike. The wife of this same buyer won't have to apologize to any of the girls in her snooker circle for the car's looks and appointments either, nor will the ride displace Old Lady Mushcan's sacroiliac. In other words, Knudsen and his well-mixed bag of pixies have fielded a car that just doesn't ignore anyone.

There are enough engine combinations for the '61 Pontiac to keep the parts manager in perpetual motion. All are V8s of 389-cubic-inch displacement with the exception of the Tempest 4, which we'll report on next month. They range in horsepower from 215 all the way up to 348. The economy models of the standard Pontiac have an 8.6:1 compression ratio, burn regular fuel and feature two or four-barrel carburetion. In the other combinations with compression ratios varying from 10.25:1 to 10.75:1, four-barrel or three two-barrel (Tri-Power) carburetion is featured. In fact, with the equipment available and a big order sheet, it's almost possible to order a custom-built engine to your specifications, providing it displaces 389 cubic inches.

Our test car was the four-barrel, 10.25:1 compression ratio rig rated at 303 horsepower. Performance-wise, it was a happy average, meaning neither the hottest nor the coldest. Zero-60 mph averaged 9.6 seconds and top speed ranged between 114-117 mph. For the record, in showroom condition the hotter combination Tri-Power will crack eight seconds for 0-60 mph and, with a good tune-up, exceed 120 mph with ease. The nice thing about a Pontiac, especially in a saloon conference, is that all standard Pontiacs look more or less alike, so the guy with the economy engine gets the same pride-of-possession boot as his neighbor who owns the wildcat version. Neither one will ever notice any difference unless they meet on a drag strip. For the real connoisseur there are two manual transmissions available, either three or four-speed synchromesh. With the four-speed box and Bonneville Tri-Power, if you can't whip up to 60 mph in seven seconds your reaction time and shifting ability are strictly bush.

In summing up, Pontiac, the undisputed King in its price bracket, will undoubtedly still be top car when '62 model time rolls around. If any of its competitors are wondering why, here's the simple formula once again: If you want good looks, Pontiac has them; if you want performance, Pontiac has it. You can disregard the rest of the features, including comfort, because Knudsen has proved that styling sells a lot of cars and performance sells many more. Mate the two and you have a combination that's hard to beat. •

Tom Tests Olds F-85

[*Continued from page* 96]

variations will filter down to good old Joe Bloewe, typical car buyer, whose main concern is, "When I turn the key, will it go?" Of course, all three V8 engines, Tempest, Special and F-85, will be subjected to close scrutiny by the hop-up men and, not long after you read this, reports are bound to come in from various speed centers about how these jobs adapt for racing. At the compact car race at Daytona this winter, droves of these rigs from all three

camps are bound to turn up.

Let's take the F-85 for a drive. In my four-door test job I found the power steering as effortless as any car I've ever handled. This one definitely has a big-car feel over rutted roads and there is ample legroom both in front and back. The headroom is phenomenal but I feel this was achieved in a slightly unusual way. The front seat is extremely low and jockey-size drivers may need either a cushion or a power seat in order to see over the steering wheel. Like the Black Angel, this car is not entirely free of faults—so let's roll them out on the table.

When driving in heavy traffic (and here's a new twist) the sedan, with its overall height of 52.6 inches plus low seating, makes visibility through the rear window and windshield of the car ahead almost impossible. It's like driving behind a huge truck, unless the car ahead is another worm-presser or a low sports car—a minor complaint, perhaps.

When driving over winding, twisty roads with a good head of steam, the tail is a little light and has a tendency to slough and chatter over ruts. After a few miles of this, a good driver will unconsciously compensate and that should be the end of that problem. The suspension—and this isn't really a fault (unlike the Buick Special)—is coil-spring all around, which allows the body to develop a heady list on turns, though there is no plowing evident.

Another slight fault that could prove annoying would be pretty hard to correct. When cruising along at a steady 50 mph, opening the front window and vent causes an irritating wind current to circulate in the interior and hit you right in the back of the head. This is also true for the front-seat passenger in the sedan at those speeds. Regardless of where you adjust the vent windows, these air currents can't be suppressed and the only way you can get rid of them is to open the rear window behind your head. Now, as you know, there are many times when you won't want more than the front window open. This little aggravation would be hard to correct as it is undoubtedly caused by the design of the body shell. The only solution possible without altering the body shape would be through differently designed vents, pos-

[*Continued on next page*]

No wonder Velvet stays smooth and mellow from first puff to last. Velvet's aged burley tobaccos are selected and cut to burn slower and cooler in any pipe, for truly Velvet-smooth smoking.

IN POCKET TINS . . . REGULAR AND LARGE SIZE HUMIDORS

© 1959 LIGGETT & MYERS TOBACCO CO.

Spend the rest of your life on Velvet!

sibly like the rear vents used by the Mercedes 300.

Another fault (not with the sedan) was in the F-85 station wagon I examined. It is a beautifully-styled wagon with loads of room but it had one serious drawback—the rear tailgate window cannot be opened! The only way you can vent through the rear is to open the entire tail assembly from the bumper up. I understand this oversight may be corrected by the time you read this.

Well, kiddies, those are the faults—now let's look at the goodies. The hood is held down by not one but two separate hood clips up front. This may seem trivial to you but at least 25 per cent of the fast cars that ran at Daytona Beach last year had to have their hoods strapped down because they had a nasty way of tearing loose and folding back over the top line, seriously obstructing vision—as they say in the coal mines when a light fuse blows. This is a good feature. Another good feature—the car has a large-sized glove box that could accommodate Yogi Berra's catcher's mitt.

The Hydramatic-type transmission is excellent and there wasn't the slightest sign of creep at red lights or stop signs. The performance was good, size and automatic transmission considered. It batted out 0-60 mph in 13.5 seconds and the stick job could undoubtedly knock two more seconds off this. Top speed ranged between 96-99 mph on several runs and, with a real tune-up, it would undoubtedly break 100 mph which should be fast enough for any compact fan.

In summing up, though it may sound trite, I think this is a real nice automobile. It's big enough for 95 per cent of the jobs anyone would use a car for. It handles like a feather and, frankly, it's a lot more pleasant to drive and makes a helluva lot more sense than many of our larger cars selling for hundreds of dollars more. It has some faults but then so did Babe Ruth. My advice, if this type of car interests you, is to go to your friendly Olds dealer and get him to let you try one. It may be just what you've been looking for. In my book it goes down as one of the top compact offerings. •

When answering advertisements please mention
MECHANIX ILLUSTRATED

Bass Fishing in Winter

[*Continued from page* 58]

more famous are Bull Shoals Reservoir in Arkansas-Missouri, Lakes Mead and Havasu in Arizona-California, Dale Hollow Reservoir in Tennessee-Kentucky and Lake Cumberland, Kentucky, many lakes in South Carolina and Georgia and in all the Gulf States.

What lures should you take along? It pays to buy bass lures locally when fishing unfamiliar waters, especially lakes and large rivers. Often plugs, spoons and jigs that murder bass back home won't get a look from fish 100 miles away.

What about Florida bass fishing? Old timers will tell you that you can fish a different Florida lake every day of the year for more than 50 years and never fish them all or get to any of the excellent bass rivers.

Florida bass are all largemouths but of a local sub-species. They grow larger and faster than other bass. Last February while fishing out of Camp George on the St. Johns River in the area of Fruitland, Will Glen, one of the best guides in the business, brought in two 12-pounders in one week. His sports caught them in Lake George, a vast widening of the river nearby. Besides this, his sports landed a number of eight- and ten-pounders and so many two- and three-pound bass that no one bothered to count them.

Where are the best places to fish in Florida? Tops on my list is Lake George in the St. Johns River, and next is the St. Johns itself all the way upriver to Lake Helen Blazes. You'll find lots of fishing camps with all types of accommodations, guides and boats. It's a good idea to make reservations well in advance.

Third on my list is Lake Okeechobee in the Everglades. Although Okeechobee is enormous, a tall man can wade much of it. It is loaded with vegetation that grows all year and from the amount of sunlight the lake gets, the vegetation and warm water make the lake the most efficient bass factory on earth.

How do you fish for bass in winter in Florida? Nine out of ten guides say there is only one way to bass fish in January, February and March—with live minnows. At this time bass are moving onto their

beds in the shallow, grassy areas of lake and river. Anglers scout along, either poling their boats or motoring slowly, while standing up scanning the water for signs of bedding bass. When they spot one of those weed-free circular cups in the bottom that denotes a bass bed, the anglers try to spot the fish to see if he is on the bed. If so, they cast a minnow so the bait lands in the center of the bed.

No bass worth his scales is going to let even a minnow invade the privacy of his bed. So he charges it and the fun begins. The proper technique is to let the bass have the bait and mouth it. The fish will usually move off the bed slowly with the bait in his mouth. Then he'll grab it again, this time head first, and swallow it. This is the angler's signal to lean back on his rod and set the hook, hard.

This does not mean you can't catch plenty of bass in Florida on artificial lures. You can. But you must know how. Plug fishing the big rivers pays off and so does fly rod fishing with huge streamers and bugs. This calls for precision casting in order to get the lures in under the heavy overhanging vegetation, on the very edge of the hyacinth jungles.

Trolling and wind-drifting weed-free areas of lakes and rivers with plastic worms and eels, letting the lures skim the bottom, also pays big dividends at times.

Many anglers balk at hiring a guide. Believe me, the $13 a day a good guide will cost you will save you days of expensive fishing over barren water, with the wrong baits and lures and in an unproductive manner. Get the best guide you can find. But it's wise to have an understanding, before you start out, that you will do all the fishing. These old pros are boyish enough to crowd you otherwise.

Good luck and happy fishing! •

STOP THOSE LEAKS!

Caulk with DAP®

DAP Caulking Compounds stop air and water leaks fast. You pay pennies to save dollars in heat loss, water damage, repair work. Easy to apply. Best you can buy to keep your home snug and comfortable. Get DAP Caulk at hardware, paint or building supply dealers. Write for do-it-yourself folder.

DAP

CAULKING COMPOUNDS
GLAZING COMPOUNDS
TUB AND TILE SEALER
SPACKLING COMPOUND

DAP inc., General Offices: Dayton 31, Ohio

DRIVER TRAINER KAR Grown-up Engineering at a Junior Price

Two passenger, precision built small car. Ideal for Driver Education for youngsters. Large enough for Father and Son. Features 3 horsepower, 4 cycle Briggs Stratton engine, automatic clutch, patented four wheel springing, geared steering, good braking, 12X4 .0016 heavy duty pneumatic inner tube tires, tubular steel chassis, 16 gauge rolled steel fenders, and adjustable seat. A Rugged Quality built product. Size: 35" wide, 70" long. Painted bright Royal Blue.

Assembly line production makes this Special Offer possible

Send 25c for complete literature on this and also on small cars for highway use.

PRICE ONLY $197.50

Accessories that can be ordered with car but not in above price are: Retractible Starter $4.50; 2 Headlights, Two Tailpipes and Electric Horn, $11.95; Geared Reverse Transmission $39. All prices F.O.B. Athens, Ohio. Not for Licensed Use.

MIDGET MOTORS CORPORATION, ATHENS 3, OHIO

Big Boom In U.S. Stamps

[*Continued from page* 67]

classified ads in MI and other publications, including your daily papers. Dealers will sell you assorted stamps at 50 for 15 cents, hundreds for a dollar. Rural collectors generally use the approval system—dealers send them booklets of stamps and the collectors take those they like, send the rest back with the payment for those taken. When ordering stamps on approval specify the kind you want and the money you can spend: otherwise the dealers will swamp you.

Beginners often feel timid about buying through the mail, wonder if it isn't better to go to the dealers in person. Not necessarily. At the dealers you can browse through his stock, taking all the time you want. With approvals you can do the same at home.

Where do you learn the lingo?

From books at the public library or the dealer's—but here's a start. First, stamps are graded *superb, very fine, fine* and *good*. *Superb* means flawless; *very fine* means having only minor flaws, such as a slight unclear postmark or a perforation defect. A *fine* stamp may have imperfect perforations, color and postmark all together; and a good stamp may have perforation teeth missing, faded color and a cancellation that's much too heavy. It is better to have a collection of 1,000 stamps of superb or very fine quality than a much larger collection padded with stamps that are merely fine or good.

Commemoratives are stamps honoring some special event or person. First U. S. commemorative was the Columbian issue, 1893, commemorating the 400th anniversary of the discovery of the New World. Commemoratives come out frequently.

First day covers are envelopes bearing stamps cancelled on the first day of issue. To get these, follow the newspapers or stamp collecting publications for Post Office announcements. These often list the city where a stamp will first be sold. Write a letter to the postmaster there, enclosing a self-addressed envelope and cash or money order to pay for the stamps. You will get the envelope back with the stamp; the stamp will be cancelled with the words "First day of issue."

Plate blocks. All stamps are printed from plates in large sheets and somewhere on the sheet will appear the number of the plate. A block of four or more stamps together with the plate number is a plate block, much prized by philatelists.

How do I join a stamp club?

Ask about them at your local stamp dealer's. If there are no clubs in your area maybe you and some other collectors can form one. They are useful, sociable organizations and very helpful to the beginner. Here he learns things like how to remove stamps—you soak them off the envelope in cold, slightly salted water, pick them up with tongs and dry them on a blotter or cloth and press, if necessary, in a book. He learns about catalogue prices—they're only approximate and they're based on the value of *"very fine"* stamps.

Do you end up with a valuable piece of property?

A good stamp collection is worth money. You can borrow money on it from loan companies. There is no duty on stamp collections; they can be taken from country to country. This was of great importance to hundreds of refugees from Nazism, who landed here stripped of everything valuable but their stamps. Top collectors get real money when they cash in—Arthur Hind of Utica, N. Y., sold his for $1,000,000.

What treasures do you start looking for right away?

Well, the 12-cent black of the August 1861 issue is worth $5,000. It was issued at the outbreak of war, then invalidated. A block of four unused ten-cent black, 1847 issue, is worth $8,500. Used they're worth only $6,000. A block of four 90-cent blacks, 1869 issue, is worth $2,500 new, $1,000 used. The 15-cent brown and blue of the 1869 issue with the center inverted will make you $10,000 richer if new, $2,000 if used. These are only some of the rarities.

Rarities are the goal of every collector but the hunt itself is fun. Stamp collecting combines the relaxation of an arm-chair hobby, the lure of gold and the companionship of fellow fanatics. So even if you don't make a fortune in stamps you'll be repaid for what you put into a collection. Fifteen million collectors can't be wrong! •

R-C Model Airplanes

[Continued from page 75]

type plane.

One of the biggest assists that the old-pro can offer the learner, once the model is completed and at the flight line, is help in trimming out or adjusting the model for the most satisfactory flight. A plane seldom comes off the workbench without need of this adjustment. The plane should be trimmed to climb straight ahead when under full power, and to descend straight ahead on low power or in the glide.

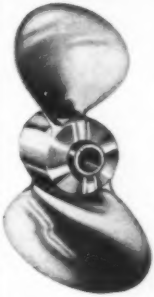
The beginner can expect a few crackups with his precious plane—it even happens to experts sometimes. Learning to fly R/C is not really difficult but it does take practice to learn timing and plane reactions. The beginner is usually wise, the first time out, if he allows an old hand to get the plane into the air for him before he takes the transmitter. If the plane has altitude he can get the feel of the controls without much danger of losing his ship. When he first solos the learner should stick to straight and level flight, gentle turns and landing.

Although there is no national roster of club names and locations, the prospective R/C modeler can easily obtain the meeting time and place of the club nearest him by dropping in on his hobby dealer.

According to Polk's Model Craft Hobbies, 314 Fifth Ave., New York, N. Y., one of the largest handlers of R/C equipment, about 20 R/C manufacturing firms cater to this huge hobby. Since R/C flying is a hobby that requires a good deal of time, the entire family is inevitably drawn into it. Some clubs encourage their members to bring their wives to the meetings and have a social affair afterward.

The R/C modeler, they say, can get glow fuel in his blood after a slight exposure. Doctors who are R/C hobbyists admit that they have found no cure—not that they are looking for one! •

new Prop-rider FOR Super Speed OUTBOARDERS!



If you're a real speed demon . . . want to have your outboard with the transom up to 2" higher than normal for that "extra ounce of speed" . . . then the new Michigan PROP-RIDER IS FOR YOU!! Revolutionary design for efficient operation with high transoms . . . no excessive slippage or cavitation . . . no reving up beyond safe limits. With the PROP-RIDER you take advantage of looser water conditions and reduce motor drag . . . get as much as 2 MPH more . . . faster too for motors on standard height transoms. Has "scooped" blade design of nonconstant pitch . . . made of famed Michalloy-K Bronze with the lifetime guarantee against blade breakage at the hub. Extremely durable. Write today for fact-filled catalog and details of the PROP-RIDER . . . the new speed champ of outboard wheels! Write for Free 1961 outboard catalog.

michigan wheel company
DEPT. MI GRAND RAPIDS 2, MICH.

Authentic Western GUNFIGHTING RIG

$16.95 complete

You receive one .38 SMITH & WESSON CALIBER SIXSHOOTER, guaranteed mechanically perfect. Will fire standard .38 S & W ammo available in any sporting goods store. PURCHASE PRICE ALSO INCLUDES one top grain all-cowhide official FAST DRAW HOLSTER with leg tie and all-cowhide matching BUSCADERO BELT. Specify waist and right or left hand holster when you order.

NOTE: Also available in .45 Caliber, if desired, at $16.95

NEW! WAX LOAD KIT FOR FAST DRAW PRACTICE, kit of 50 primed .38 S&W or .45 ACP Cal. Brass cartridges, loading wax and instructions. Complete $2.45

TO ORDER: Send check, cash or money order. $5 deposit for C.O.D. Shipped F.O.B. Culver City. 10-day money back guarantee.

2-Gun Rig, $31.95

WEAPONS, INC. 11039 WASHINGTON BLVD. CULVER CITY 41, CALIF.

Trindl "THE VICTOR" ARC WELDER

FREE Write for Details and Easy Pay Plan

WELD FOR PLEASURE OR PROFIT
TRINDL INDUSTRIAL ARC WELDER

Own a Trindl 125 Amp Industrial Welder at less than smaller machines. Welds metals to ⅛" thick. Operates off properly wired 110 or 220 volt line. 16 heat stages from 20 to 125 amps. Make, repair anything of metal in the home, garage, farm or shop. No experience or training needed. Full "do-it-yourself" instructions. Guaranteed 12 months in continuous operation. Complete only $98.50 FOB or write for details on 125A and other Heavy Duty Trindl Welders. Dealer Inquiries Invited.

Trindl Products, Ltd., Dept. T4-A, 1807 S. Clark St., Chicago 16, Ill.

EASY TERMS $98.50 FOB

Detroit's New Engine

[*Continued from page* 69]

the rear wheels of the vehicle through a speed reducing gear case and differential.

The gas turbine engine provides a much smoother drive force and has many other advantages. With the proper silencing device, it is quieter than a reciprocating engine and because the sound is high frequency, it is more easily dealt with by sound absorbent materials.

By using a regenerator, which reuses the hot exhaust gases, the final exhaust is so cool that you can pass your hand through it without major discomfort. With a regenerator, economy is comparable to the other types of engines but without the regenerator it is admittedly less economical. On the plus side, it will burn kerosene, diesel fuel or other cheap fuels.

The only additional component to the engine is the starter which weighs about 15 pounds or less, thus making the overall engine considerably lighter than its reciprocating brother. Costwise, Sam Williams, president of Williams Research, believes that produced in equal quantities, it should cost the same as present engines.

The question arises as to why, with all these advantages, the gas turbine doesn't take over. There is still one stumbling block—acceleration.

From a standing stop, a car or truck could be braked with the compressor revving up, then jump away with a tremendous burst of speed. But if the car was idling along at ten or 15 or 20 miles an hour, acceleration would be slow.

That is why the gas turbine is more practical for stationary engines, heavy road-grading equipment, boats and heavy hauling vehicles at the moment. But Williams feels this problem of acceleration is being solved by the concentrated effort of several turbine manufacturers.

In the last six years, Williams has developed an inboard-outboard gas turbine engine for pleasureboats in addition to the world's smallest turbo jet now being produced for military drone aircraft and,

DO IT YOURSELF

Now you can Build Your Own Nest Egg. Enter Cavalier's $50,000 Double Jackpot Contest and win cash prizes.

We've done most of the work for you—all you have to do is to complete a crossword puzzle. We give you full definitions, and many of the letters are already filled in. It's fun to do. You'll find the complete plans on how to build your nest egg by winning the **$30,000 First Prize,** or the **$20,000 Second Prize** in Cavalier's Double Jackpot Contest plus information on how to be eligible for cash bonuses—**in the February Cavalier Magazine on sale Dec. 29**

most recently, the world's largest gas turbine for vehicular use.

"The gas turbines we are and others are developing will rapidly serve applications in the heavy industrial and heavy vehicle field," predicts Sam Williams. "Next will come light industrial and marine use—and eventually they will be adapted to sports cars and general automotive use." •

Feather Merchant

[*Continued from page* 70]

feathers such as ostrich plumes, which were not available in L.A. during the war —or so it seemed until one day when Joe was browsing through the basement of a Los Angeles department store and spotted some feather dusters piled up on a bargain counter. To his delight he saw that each contained a dozen untrimmed ostrich feathers. He bought two dusters, hurried back to his shop, trimmed and dyed the feathers and steamed them over a kettle to make them curl langorously. Then he took them to the millinery buyer of the same department store and got a large order for more. "I don't know how you got these," said the buyer. "We haven't had an ostrich plume since the war began." Joe bought and sold all the feather dusters in all the stores in L. A., and then the war was over.

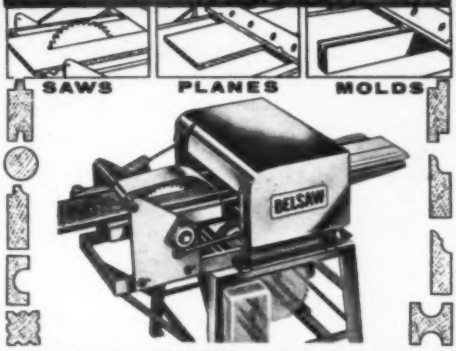
Today he buys rooster feathers from Italy, peacock feathers from India, duck feathers from Hong Kong, pheasant feathers from Thailand, ostrich plumes from South Africa and vulture feathers from South America.

Nowadays lots of fan dancers come to Joe with their problems, and one girl's was that all her fans had been stolen and she needed new ones pronto. Joe made some up fast but warned her that the glue would need 24 hours to dry. She ignored the warning and in the middle of her tantalizing turn she began to molt—to the coarse delight of the expense account Charlies. She got off the floor clutching mere handfuls of feather. A ticklish business at times, says the feather merchant.

—*Jack B. Kemmerer*

When answering advertisements please mention
MECHANIX ILLUSTRATED

NEW BELSAW **MULTI-DUTY** POWER TOOL



Now you can use this ONE **power feed** shop to turn rough lumber into high-value moldings, trim, flooring, furniture . . . ALL popular patterns.

RIP....PLANE....MOLD...separately or all at once by power feed . . . with a one horsepower motor. Use 3 to 5 HP for high speed commercial output.

LOW COST . . . You can own this MONEY MAKING POWER TOOL for only . . . . . **$30.00** down payment

Send coupon today

BELSAW POWER TOOLS 931 Field Bldg., Kansas City 11, Mo.
Send me complete facts on the MULTI-DUTY Power Tool. No obligation.

Name _____
Address _____
City _____ State _____

FIBERGLASS or PLYWOOD

50 Models 8-22 Ft.

FACTORY-DIRECT PRICES

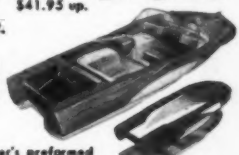
FREE CATALOG, WRITE TODAY

18 FT. CRUISERS, 8 Models: from $369

12, 14, 16, 18 ft. runabouts, ski-models, convertibles, utilities: $104 up. 8, 10, 12, 14, 16, 18 ft. racing, fishing, utilities: $41.95 up.

FIBERGLASS 14 & 16 ft.
From $299 (at right)

Interlocking units (lower right photo) snap together, bond into 1-piece boat easily assembled in one evening.



FIBERGLASS 14 ft. Sail Boat $199 with Sail

Luger's preformed preassembled units are easily assembled by anyone. Equal factory-built yet save ½ to ⅔. FREE catalog has all details, trailers, accessories, paint, Fiberglass supplies.

MONEY-BACK GUARANTEE
EASY TERMS ¼ DOWN

SEND FOR FREE COLOR CATALOG

LUGER BOAT KITS

Dept. D-1, 9200 Access Rd., Minneapolis 20, Minn.

ALL NEW!

1961 Edition of Constantine's
WOODWORKING CATALOG & MANUAL

Get the biggest Constantine Catalog & Manual—2000 items! World's largest source since 1812 for rare imported and domestic woods in veneers, lumber, plywoods, bandings, inlays, mouldings, carvings . . . hard-to-find hardware, new solid brass hardware, wood finishing and upholstery supplies, patterns, tools, woodworking materials—at bargain prices! Also exclusive Inlaid-Wood-Picture Kits . . . Identification Chart of 60 rare woods in color . . . inspiring projects, plans, etc. For all-new 1961 Catalog & Manual, send 25¢ (refunded on first order). Write today!

FREE—Year's subscription to "Chips & Chats" . . . brings news of exciting woodworking ideas and latest offerings . . . Free with Catalog!

ALBERT CONSTANTINE AND SON, INC.
2050 Eastchester Rd., Dept. A-1
New York 61, N. Y.

New KING MIDGET FOR 1961

WORLD'S MOST EXCITING LOWEST PRICED CAR

Rider Agents Wanted. Send 25c for 32 page picture book, full details, dealer price. Or send $1 (refunded first order) for this plus Service and Repair Manual and 16 5x7 photos of car and factory.
MIDGET MOTORS CORPORATION, Athens 3, Ohio

BETTER BUY
U. S. SAVINGS BONDS
for a BETTER FUTURE

TAFT "CAT KIT"
14 Ft. Catamaran Boat Kit

MASS PRODUCTION PRICE! EASY TERMS
18 ft. roominess, seaworthiness
$279 Freight Prepaid
FREE CATALOG
TAFT MARINE WOODCRAFT
Dept. MI-161, 636 39th Ave. N. E. Minneapolis, Minn.

Works in seconds!

Loosens Rusted Bolts
nuts, screws, "frozen" parts!
LIQUID WRENCH
SUPER-PENETRANT
The super-penetrating rust solvent that quickly loosens rust and corrosion.
AT ALL HARDWARE AND AUTO STORES
RADIATOR SPECIALTY COMPANY
CHARLOTTE, N. C.

Ice Plow

[*Continued from page 77*]

Frank C. Ehinger, an efficiency engine of Adrian, Mich., who has come up wi a possible answer. Last year he patente a ship designed to cut a path through sol icefields, leaving a clear, ice-free chann behind it. Instead of merely breaking u the floes and passing the pieces aster Ehinger's ice plow cuts the ice into narro ribbons, breaks these up into small chunk and forces them along a ramp into th ship's maw. Here they are reduced chips, passed into a compressed air nozz and blown over the side.

The entire bow section of the ice plo can be opened by dropping its botton hinged sides to a horizontal position. He they form ramp-like wings, level with an an extension of the ship's lower deck Wings and deck tilt slightly in and dow so that together, they form a shallow fun nel leading to the ice crushing machiner beneath the vessel's bridge section. Thi in turn, connects with a powerful blowe through which the ice is discharged.

The business end of Ehinger's channe cutter is a row of big rotary saws, mounte on a pivoting frame that swings out ove the vessel's bow. The frame is built i two halves which latch together into single unit when cutting. Each half is separately powered by a husky electric mo tor which drives the saw spindle throug simple gears and shafting. Mounted between the individual saw blades are radia chippers which break up the ice ribbon as they are cut, flipping the pieces back onto the ramp. As the ship advances these are forced rearward by the pressur of freshly cut ice. Heating elements ma be used to keep the shafting, saws an spindles from freezing in their bearings.

When not in operation, the pivoted saw frames are unlatched and the two halve are swung up and back on either side of the hoisting foremast and then down again onto deck cradles where they are secured.

Ehinger believes a fleet of his channe cutters can more than earn their way by permitting year-round use of the Seaway and the Great Lakes. He may soon have a chance to prove he's right for an oil company recently bought the rights to hi plow and plans to build it. •

Mail For McCahill

[Continued from page 52]

hauling of boats up to 9 feet, 6 inches wide. We do not issue permits for anything beyond this width. The Administrative structure of the South Carolina State Highway Department and the Highway Patrol make it practically impossible for any kind of "payola" system to operate in the state since a boat and trailer would have to be towed through a number of counties, each of which has its own Patrol unit under specific supervision. I am, therefore, calling on you to give me evidence which you apparently have in your possession regarding the moving of your boat through this state. If I find that it has any basis in fact, you may be sure that any improper action by members of my staff will be treated with sternness. I shall also appreciate your publishing this letter with a request that any of your readers who have information or evidence of this nature give it directly to me. In that way, if there is any misconduct on the part of any employees of the State Highway Department, it can be dealt with as it should be.

C. R. McMillan
Chief Highway Commissioner
State H'wy Dep't, Columbia, S.C.

Let's put it this way. My boat, *The Rooster*, has, and always has had, a 10'6" beam. In its nine trips one way or the other to Florida it was shipped three times and I skippered the route six times. On two of the land trips (one north and one south in 1957) it took the coastal route. In 1959 it was forced to take the "scenic" route. Any of you boat owners who have any beefs, send them to Commissioner McMillan.

- *I am a delivery boy and do a great deal of walking around Boston. Last week I saw a Chrysler 300C. I told this to a friend of mine and he said there was no such car. Is there such a car and, if so, was it a custom job? If not, is it any relation to the 300F?*

George Silverman
Brookline, Mass.

All the 1957 Chrysler 300s were known as 300Cs.

- *If you were unavoidably involved in a highway accident, what kind of car would you prefer to be in?*

John Morris
Montreal, Quebec

An armored car.

- *Many times have I heard and read that the new rear opening hoods on some of*

[Continued on next page]

Keep All 6 Volt or 12 Volt Batteries Fully Charged At All Times—In Any Weather!

with HOME BATTERY CHARGER

Designed specifically for car-owner and fleet owner use. In many ways superior to the chargers used in gas stations.

(Actual size 3⅛" x 4" x 1⅝")

Most importantly this device charges at a "safe" rate with no possibility of buckling or damaging plates. "Hot shot" station charges necessarily use high current to assure "fast" charging, an economical necessity for the operator. Frequently, that method causes "flaking" due to excessive current surges.

Home Battery Charger is in every way a full fledged charger, not a gadget. It employs an oversized selenium rectifier working in conjunction with a tapped step-down transformer to provide a "safe" charging rate of current for both 6 volt and 12 volt batteries.

Home Battery Charger is a permanent investment—It will outlast all cars you will ever buy. Never again will you have to worry about being stranded on an open road, or worse still, in the middle of heavy traffic. Never again difficult starts on cold mornings. To use, simply plug the line cord into any 110 volt outlet—connect the two terminals to your battery—and walk away! That's all you need to assure full charge at all times. You can't connect this device wrong—for if you do—a warning trouble light on the front panel lights. You can't overcharge because charging drops automatically when the battery is fully charged.

SAVE MORE! Not only will Home Battery Charger save you battery costs—but because a weak or defective battery can easily damage other expensive components in your car, a battery fully charged at all times will appreciably reduce other repair charges. **$9.95**

SEND NO MONEY WITH ORDER — PAY POSTMAN NOTHING ON DELIVERY!

So certain are we that once you examine and try this vitally needed device you won't want to part with it; we offer to ship Home Battery Charger at our risk on the following basis.

After 10 day free trial, you may either remit the cash price of $9.95 plus postage; remit only $4. and the balance plus small budget and postage charge in two monthly payments; or if not completely satisfied return the Charger cancelling any further obligation.

Accurate Instrument Co., Inc.
Dept. D-101, 911 Faile St., New York 59, N.Y.

Please rush 1 Home Battery Charger. I'll either remit $9.95 plus postage after 10 day trial; pay on your easy terms, or return the Charger.

Name.....
Address.....
City..... Zone..... State.....

CRAFTSMEN—GET NEW 132 PAGE CATALOG

WOOD

and Workshop Supplies, Equipment

World's Largest Selection, Rare, Fancy & Imported Woods, Mosaic Tile, Lamp and Upholstery Supplies, Tools & Hardware!

ALL AT MONEY SAVING PRICES! . . .

Send for this complete new wood buying guide and project book. Craftsman is your best, most complete source of finest kiln-dried domestic and rare imported woods, beautiful wood inlays, colorful bandings, matched plywoods, embossed moldings, carved ornaments, newest woodworking tools, "hard to find" cabinet hardware and fittings. . . more than 1,500 items! Packed with new patterns, project ideas and money making plans. Enclose 25c (refunded with first order) to help pay mailing and handling cost. Write:

CRAFTSMAN WOOD SERVICE CO., Dept. G-1
2729 South Mary St., Chicago 8, Ill.

NOW—Stanley Power Tools at Discount Prices!

75 POWER TELESCOPE 25X-45X-75X $3.98

NEW 3 in one telescope, 3 variable 25X-45X-75X magnification. Brass bound, 25 power for ultra bright images 45 & 75 power for long range. Guaranteed to bring distant stars, moons, objects, sports 75 times closer.

Most powerful scope sold anywhere near this amazing-low price. American made, 3 sections. Opens 36", closes 1 ft.; contains 4 ground & polished lenses. Can also be used as powerful compound microscope. Mass production enables us to offer telescope complete at $3.98 postpaid. Money back guarantee.

CRITERION CO., Dept. BML-92, 331 Church St., Hartford, Conn.

"MINIATURE MACHINE SHOP

No Bigger Than A Typewriter, Outperforms Machines Many Times its Size!"

That's what Mechanix Illustrated says about UNIMAT in their 3 page feature story in the May issue. If you want a reprint of this story plus complete information about this amazing 10 in 1 combination precision tool write to:

AMERICAN EDELSTAAL, INC., UNIMAT DIV. Dept. JA. 350 B'way., N. Y. 13

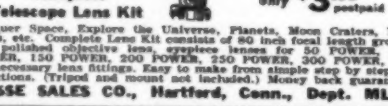
$7.95 DRAINS cellars, cisterns, wash tubs
IRRIGATES - CIRCULATES - SPRAYS

1,001 uses. Stainless shaft. Won't rust or clog! Use ½ HP motor or larger. . . . ¾ HP for up to 3,400 GPH; 450 GPH 80' high; or 1,800 GPH from 23' well. 1" inlet; ¾" outlet. Coupling included free. ---------- $7.95

Heavy Duty Ball-Bearing Pump. Up to 5,200 GPH 1¼" inlet; 1" outlet. --- $12.95 Postpaid if cash with order. Also other sizes, types. MONEY BACK GUARANTEE

LABAWCO PUMPS, Belle Mead 38, N. J.

300 POWER . . . .



Complete Telescope Lens Kit only $3.98 postpaid

Conquer Space, Explore the Universe, Planets, Moon Craters, New Stars, etc. Complete Lens Kit consists of 60 inch focal length ground and polished objective lens, eyepiece lenses for 50 POWER, 100 POWER, 150 POWER, 200 POWER, 250 POWER, 300 POWER, and all necessary lens fittings. Easy to make from simple step by step instructions. (Tripod and mount not included.) Money back guarantee.

BUSSE SALES CO., Hartford, Conn., Dept. ML-96

GUNK degreases

At better automotive supply and hardware retailers everywhere.

Cleans engines, garage floors, power mowers, greasy walls economically and safely.

In aerosol or pour spout cans.

GUNK CHICAGO CO., River Forest, Illinois
RADIATOR SPECIALTY CO., Charlotte, No. Carolina

the current autos are so much safer than the front opening type, simply because they will not pop open and fly back in your face. This is very true but I have noticed on the new models that even a very slight collision will cause the rear opening hoods to unlatch and come through the windshield like a big straight razor. The front opening type might buckle or even fold back over the windshield but never did I see one act like the new ones do. Looks like such a hazard would be worse than an occasional hood popping loose. What do you think?

J. F. Bushnell
Harlan, Ky.

Rear openers are safer. You're finding fault with the construction which only the jokers behind the drawing boards can make right.

● *Something has been bugging me for a long time. I've never heard your name on the top 20 so I'm not always sure just how to pronounce it. This makes it a bit embarrassing when I quote the old man. I'm betting it's spoken Mc-Kay-Hill but maybe McCall?*

A/1c Duane H. Thorn
APO 328, San Francisco

The hangman used to pronounce it "Makail" when he'd lead my ancestors to the scaffold.

● *I have a '53 Studebaker Six with overdrive. Recently I took a trip, driving from Minneapolis to Galesburg, Ill. on one tank of gas with some to spare. I kept it between 55 and 60 mph. The gas mileage figured out to 32 mpg. Everybody says it is impossible and that I'm nuts. Please confirm that it was possible to get this mileage per gallon.*

Lee Waldon
Minneapolis, Minn.

Sure, it's possible, but you must have done some careful driving.

● *Need some advice. My son, age 16½, has a 1937 Dodge he intends to rehabilitate. Considering his age and experience, I rate his ability and driving judgment highly enough to allow him the use of the family car. Question: Would it be wise to allow him to drop the front end (only) of his car, in a shop project, to a point where there will be a seven inch clearance between axle and road? The rear end of the car will remain at present height (stock). This modification is apparently something adolescent car owners consider "sharp" in this part of the country. My real concern is the change in driving characteristics, shifting of center of gravity and the danger involved in a possible quick, necessary change in direction. What do you think?*

Bill Overton
San Diego, Calif.

A lot would depend not only on your son's

ing ability but his engineering know-how, how this job was to be accomplished. y a hot-rodder has been hurt by fooling nd with the manufacturer's front end mbly and steering geometry without the c engineering background needed.

I've read in your column that one of the worst things a person can do to a car, er than hard, abusive driving, is to drive it real short distances, especially in the win- time. My home is less than one mile from job and I have to drive back and forth ry day. What can I do to neutralize the effects of this short-trip driving?

George Palecek
Denver, Colo.

You have a tough problem because if you directly to work without any stops and urn the same way, your car never gets a nce to get fully warm in the winter. This ses condensation in the engine's gizzard d will quickly ruin your muffler and tail- e. The best way to avoid this sort of treat- nt is an extra several minutes of warming- in the morning and a few extra minutes running on your return. In the old days nd it's still true), the best way to get long r life was never to start an engine unless u were prepared to let it get fully warmed- before shutting-off. In some cars this may ke from ten to 12 miles, or 25 minutes. Why n't you move further away from your job? tter still, dig up an electric car; it would be al for such short-hauling.

In the June MI a Mr. J. W. in Valley Stream, N.Y., asked if you can't top this regard to the ducks left in his car. I'm re this remedy will take the smell out of his r: Go to a lumber yard and get a handful cedar post stripping and burn it inside the r. I've used this on dead shrimp left in rs and on skunks.

H. E. C., Jr.
San Antonio, Texas

Yours must be an interesting occupation.

I was looking through my husband's July issue of MI and noticed the letter you re- ived concerning the safety warning "Al- ohol and gasoline don't mix." Didn't he nderstand the man meant drinking and driv- ng don't mix?

Mrs. Johnny Saurman
Lebanon, Ind.

Then why don't they say so? There's en- rely too much horsing around in this coun- ry as it is.

—Tom McCahill

SCIENCE BARGAINS

See the Stars, Moon, Planets Close Up!

3" ASTRONOMICAL REFLECTING TELESCOPE

60 to 180 Power—Famous Mt. Palomar Type! An Unusual Buy!

Assembled—Ready to use! You'll see the Rings of Saturn, the fascinating planet Mars, huge craters on the Moon, Star Clusters, Moons of Jupiter in detail. Galaxies! Equatorial mount with lock on both axes. Aluminized and overcoated 3" diameter high-speed f/10 mirror. Telescope comes equipped with a 60X eyepiece and a mounted Barlow Lens, giving you 60 to 180 power. Low-cost accessory eyepiece available for higher powers. An Optical Finder Telescope, always so essential is also included. Sturdy hardwood, portable tripod. FREE with Scope:—Valuable **STAR CHART** plus 272 page **"HANDBOOK OF HEAVENS"** plus **"HOW TO USE YOUR TELESCOPE"** BOOK.
Stock No. 85,050-B ..... **$29.95 postpaid**

NEW! SCIENCE FAIR PROJECT KITS

Edmund Kits are carefully planned to give any boy or girl the fun and excitement of discovering science facts. Such carefully planned projects can lead the student to awards or scholarships. Adults too will find them an excellent introduction to the various fields of scinece.

For Junior High School and beyond:

MOLECULE AND CRYSTAL MODELS KIT—Rods and balls to make atomic models, plus directions.
Stock No. 30,413-B ..... **$2.50 Postpaid**

NUMBER SYSTEMS ABACUS—Makes a dramatic exhibit demonstrating number systems other than the decimal system.
Stock No. 70,334-B ..... **$4.25 Postpaid**

SOIL TESTING KIT—Basis for many fascinating experiments regarding growth of plants, etc.
Stock No. 60,118-B ..... **$2.00 Postpaid**

TOPOLOGY—All the ingredients for a project on 4 color map problems, Moebius strips, etc.
Stock No. 70,353-B ..... **$6.00 Postpaid**

CRYSTAL GROWING KIT—Grow breathtaking display of large crystals with this set.
Stock No. 70,336-B ..... **$9.50 Postpaid**

For Ages 8 Thru Jr. High School:

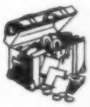
MAGNETISM KIT—Based on magnetism demonstrations developed by UNESCO.
Stock No. 70,325-B ..... **$3.75 Postpaid**

COLOR THROUGH POLARIZATION—Show the beautiful color effects produced by passing polarized light through transparent objects.
Stock No. 70,350-B ..... **$2.00 Postpaid**

OPTICAL ILLUSION KIT—Diagrams, lenses, mirrors, etc. for producing many amazing optical illusions.
Stock No. 70,352-B ..... **$3.00 Postpaid**

MATH TREASURE CHESTS—Show your youngster that math can be loads of fun. Here are expertly selected collections of mathematical tools, games, gadgets, and other items that will give your boy or girl exciting fun for months to come and at the same time help him in school by enriching his understanding of mathematical principles and procedures.
Stock No. 70,327-B—(For ages 5 to 8)..... **$10.00 Postpaid**
Stock No. 70,328-B—(For ages 8 to 12).... **$10.00 Postpaid**
Stock No. 70,329-B—(For ages 12 up)..... **$10.00 Postpaid**

SCIENCE TREASURE CHESTS



For Boys—Girls—Adults! Excellent "Science Fair" Material! **Science Treasure Chest**—Extra-powerful magnets, polarizing filters, compass, one-way-mirror film, prism, diffraction grating, and lots of other items for hundreds of thrilling experiments, plus a Ten-Lens Kit for making telescopes, microscopes, etc. Full instructions included.
Stock No. 70,342-B ..... **$5.00 Postpaid**

Science Treasure Chest DeLuxe—Everything in Chest above plus exciting additional items for more advanced experiments including crystal-growing kit, electric motor, molecular models set, first-surface mirrors, and lots more.
Stock No. 70,343-B ..... **$10.00 Postpaid**

ORDER BY STOCK No.—SEND CHECK or M.O.—Money-Back Guarantee
EDMUND SCIENTIFIC CO. BARRINGTON, NEW JERSEY

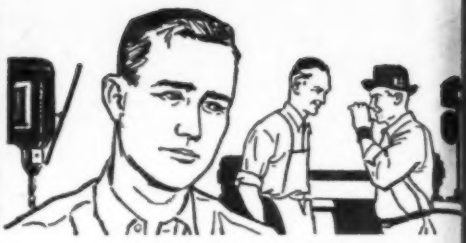
MAIL COUPON for FREE CATALOG "B"

144 Pages! Over 1000 Bargains!
EDMUND SCIENTIFIC CO., Barrington, N. J.
Please rush Free Giant Catalog-B.

Name .....
Address .....
City..... Zone..... State.....

JUL 31 1961

"HOW A 'CRAZY RUMOR' GOT ME PROMOTED!"



What I overheard one morning shook me right out of a rut!

"Company's getting ready to cut back . . . bound to be layoffs," I heard them say. "Just another crazy rumor," I told myself.

Just the same, I took quick stock of myself that night. Came up with four good reasons why the company would keep me on:

Three years' experience
Getting along with foreman
Turning out acceptable work
Prompt and dependable

And four just-as-good reasons why they might let me go:

Making no real headway
Others better qualified
Still rated "semi-skilled"
Needs special training

I wasn't in trouble. But I sure wasn't "in solid" like I should be. That's when I made up my mind to enroll for training with I.C.S.

I picked I.C.S. because it's the oldest and larg est with 257 courses. The training is quick an thorough. It's recognized by my company an accredited by the National Home Study Counci You study in your spare time and get personal ized, practical instruction—know-how you ca apply next day on the job.

That was a year ago. There have been tw layoffs since then. While some of the others we just hanging on or being released, I was movin up. My I.C.S. training started something. N only did it get me promoted (with a fat pa hike), but it put me in line for real advance ment.

Don't wait for a "crazy rumor" to set you straight. Take out your "job insurance" righ now. Mail the coupon and get full, free detail on how I.C.S. has helped thousands, how it ca help you. No obligation—and you get thre valuable books *free!* (1) How to Succeed; (2 Catalog of opportunities in the field of you choice; (3) Sample lesson (math).

For Real Job Security—Get an I. C. S. Diploma! **I. C. S., Scranton 15, Penna.** Accredited Member, National Home Study Coun

INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

BOX 73083M, SCRANTON 15, PENNA. (In Hawaii, reply P.O. Box 418, Honolulu) (Partial list of courses)

Without cost or obligation, send me "HOW to SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (plus sample lesson):

ARCHITECTURE and BUILDING CONSTRUCTION
- ☐ Air Conditioning
- ☐ Architecture
- ☐ Arch. Drawing and Designing
- ☐ Building Contractor
- ☐ Building Estimator
- ☐ Carpenter Builder
- ☐ Carpentry and Millwork
- ☐ Heating
- ☐ Painting Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

ART
- ☐ Commercial Art
- ☐ Magazine Illus.
- ☐ Sign Painting and Design'g
- ☐ Sketching and Painting

AUTOMOTIVE
- ☐ Automobile
- ☐ Auto Body Rebuilding and Refinishing
- ☐ Auto Engine Tuneup
- ☐ Auto Electrical Technician
- ☐ Diesel Engines

AVIATION
- ☐ Aero-Engineering Technology
- ☐ Aviation Engine Mech.
- ☐ Reading Aircraft Blueprints

BUSINESS
- ☐ Accounting
- ☐ Advertising
- ☐ Bookkeeping and Cost Accounting
- ☐ Business Administration
- ☐ Business Management
- ☐ Clerk Typist
- ☐ Creative Salesmanship
- ☐ Managing a Small Business
- ☐ Professional Secretary
- ☐ Public Accounting
- ☐ Purchasing Agent
- ☐ Real Estate Salesmanship
- ☐ Salesmanship
- ☐ Salesmanship and Management
- ☐ Traffic Management

CHEMICAL
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Chem. Lab. Technician
- ☐ General Chemistry
- ☐ Oil Field Technology
- ☐ Pulp and Paper Making

CIVIL ENGINEERING
- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Professional Engineer (Civil)
- ☐ Reading Struc. Blueprints
- ☐ Sanitary Engineer
- ☐ Sewage Plant Operator
- ☐ Structural Engineering
- ☐ Surveying and Mapping
- ☐ Water Works Operator

DRAFTING
- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Drafting & Machine Design
- ☐ Electrical Drafting
- ☐ Electrical Engineer Drafting
- ☐ Industrial Piping Drafting
- ☐ Mechanical Drafting
- ☐ Sheet Metal Drafting

ELECTRICAL
- ☐ Electrical Appliance Servicing
- ☐ Electrical Engineering
- ☐ Electric Motor Repairman
- ☐ Elec. Engr. Technician
- ☐ Elec. Light and Power
- ☐ Practical Electrician
- ☐ Practical Lineman
- ☐ Professional Engineer

HIGH SCHOOL
- ☐ Good English
- ☐ High School Diploma
- ☐ High School General
- ☐ H. S. College Prep. (Eng'r'g & Science)
- ☐ High School Math
- ☐ High School Science
- ☐ Short Story Writing

LEADERSHIP
- ☐ Industrial Foremanship
- ☐ Industrial Supervision
- ☐ Personnel-Labor Relations
- ☐ Supervision

MECHANICAL and SHOP
- ☐ Diesel Engines
- ☐ Gas-Elec. Welding
- ☐ Heating and Air Conditioning
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Safety
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Plumbing and Heating
- ☐ Professional Engineer
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigeration and Air Conditioning
- ☐ Tool Design ☐ Tool Making

RADIO, TELEVISION
- ☐ General Electronics Tech.
- ☐ Industrial Electronics
- ☐ Practical Radio-TV Eng'r'g
- ☐ Radio-TV Servicing
- ☐ TV Technician

RAILROAD
- ☐ General Railroad

STEAM and DIESEL POWER
- ☐ Combustion Engineering
- ☐ Power Plant Engineer
- ☐ Stationary Diesel Engr.
- ☐ Stationary Steam Engines

TEXTILE
- ☐ General

Name _____ Age _____ Home Address _____

City _____ Zone _____ State _____ Working Hours _____ A.M. to P.M. _____

Occupation _____

Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd., Montreal, Canada. . . . Special low monthly tuition rates to members of the U. S. Armed Forces.

F '61

Can you profit by their mistakes?

"Not getting enough education"

You needn't make that mistake. You can get that better job, those big promotions, the regular raises that so many I. C. S. students report. And you can do it without "going to school," without interfering with your present job or your social life.

YOU can study with I. C. S. at home, in your spare time!

"Wrong choice of career"

When you study with I. C. S. you have 256 courses to choose from. And part of our job here at I. C. S. is not only giving you instruction but making sure you pick the course that's right for you!

YOU get expert guidance FREE from I. C. S.!

"Failed to seize opportunities"

Your opportunity is right here on this page. Don't pass it by. Don't put it off. Mail the coupon now and let us send you our 3-book career kit.

YOU get 3 FREE books if you mail the coupon today!

1. **36-page gold mine of information, "How to Succeed."**
2. **Career Catalog outlining opportunities in your field.**
3. **Sample I. C. S. lesson (Math.).**

For Real Job Security—Get an I. C. S. Diploma! I. C. S., Scranton 15, Penna.

Accredited Member, National Home Study Council

INTERNATIONAL CORRESPONDENCE SCHOOLS

ICS

BOX 70083A, SCRANTON 15, PENNA. (In Hawaii, reply P.O. Box 418, Honolulu) (Partial list of courses)

Without cost or obligation, send me "HOW to SUCCEED" and the opportunity booklet about the field BEFORE which I have marked X (plus sample lesson):

ARCHITECTURE and BUILDING CONSTRUCTION
- ☐ Air Conditioning
- ☐ Architecture
- ☐ Arch. Drawing and Designing
- ☐ Building Contractor
- ☐ Building Estimator
- ☐ Carpenter Builder
- ☐ Carpentry and Millwork
- ☐ Heating
- ☐ Painting Contractor
- ☐ Plumbing
- ☐ Reading Arch. Blueprints

ART
- ☐ Commercial Art
- ☐ Magazine Illus.
- ☐ Sign Painting and Design'g
- ☐ Skelching and Painting

AUTOMOTIVE
- ☐ Automobile
- ☐ Auto Body Rebuilding and Refinishing
- ☐ Auto Engine Tuneup
- ☐ Auto Electrical Technician
- ☐ Diesel Engines

AVIATION
- ☐ Aero-Engineering Technology
- ☐ Aviation Engine Mech.
- ☐ Reading Aircraft Blueprints

BUSINESS
- ☐ Accounting
- ☐ Advertising
- ☐ Bookkeeping and Cost Accounting
- ☐ Business Administration
- ☐ Business Management
- ☐ Clerk Typist
- ☐ Creative Salesmanship
- ☐ Managing a Small Business
- ☐ Professional Secretary
- ☐ Public Accounting
- ☐ Purchasing Agent
- ☐ Real Estate Salesmanship
- ☐ Salesmanship
- ☐ Salesmanship and Management
- ☐ Traffic Management

CHEMICAL
- ☐ Analytical Chemistry
- ☐ Chemical Engineering
- ☐ Chem. Lab. Technician
- ☐ General Chemistry
- ☐ Oil Field Technology
- ☐ Pulp and Paper Making

CIVIL ENGINEERING
- ☐ Civil Engineering
- ☐ Construction Engineering
- ☐ Highway Engineering
- ☐ Professional Engineer (Civil)
- ☐ Reading Struc. Blueprints
- ☐ Sanitary Engineer
- ☐ Sewage Plant Operator
- ☐ Structural Engineering
- ☐ Surveying and Mapping
- ☐ Water Works Operator

DRAFTING
- ☐ Aircraft Drafting
- ☐ Architectural Drafting
- ☐ Drafting & Machine Design
- ☐ Electrical Drafting
- ☐ Electrical Engineer Drafting
- ☐ Industrial Piping Drafting
- ☐ Mechanical Drafting
- ☐ Sheet Metal Drafting

ELECTRICAL
- ☐ Electrical Appliance Servicing
- ☐ Electrical Engineering
- ☐ Electric Motor Repairman
- ☐ Elec. Engr. Technician
- ☐ Elec. Light and Power
- ☐ Practical Electrician
- ☐ Practical Lineman
- ☐ Professional Engineer

HIGH SCHOOL
- ☐ Good English
- ☐ High School Diploma
- ☐ High School General
- ☐ H. S. College Prep. (Eng'r'g & Science)
- ☐ High School Math
- ☐ High School Science
- ☐ Short Story Writing

LEADERSHIP
- ☐ Industrial Foremanship
- ☐ Industrial Supervision
- ☐ Personnel-Labor Relations
- ☐ Supervision

MECHANICAL and SHOP
- ☐ Diesel Engines
- ☐ Gas-Elec. Welding
- ☐ Heating and Air Conditioning
- ☐ Industrial Engineering
- ☐ Industrial Instrumentation
- ☐ Industrial Safety
- ☐ Machine Shop Practice
- ☐ Mechanical Engineering
- ☐ Plumbing and Heating
- ☐ Professional Engineer
- ☐ Quality Control
- ☐ Reading Shop Blueprints
- ☐ Refrigeration and Air Conditioning
- ☐ Tool Design ☐ Tool Making

RADIO, TELEVISION
- ☐ General Electronics Tech.
- ☐ Industrial Electronics
- ☐ Practical Radio-TV Eng'r'g
- ☐ Radio-TV Servicing
- ☐ TV Technician

RAILROAD
- ☐ General Railroad

STEAM and DIESEL POWER
- ☐ Combustion Engineering
- ☐ Power Plant Engineer
- ☐ Stationary Diesel Engr.
- ☐ Stationary Steam Engines

TEXTILE
- ☐ General

Name _____ Age _____ Home Address _____

City _____ Zone _____ State _____ Working Hours _____ A.M. to P.M. _____

Occupation _____

Canadian residents send coupon to International Correspondence Schools, Canadian, Ltd., Montreal, Canada. . . . Special low monthly tuition rates to members of the U. S. Armed Forces.